



AUSTRALIA

# *South Australian Year Book*

1980

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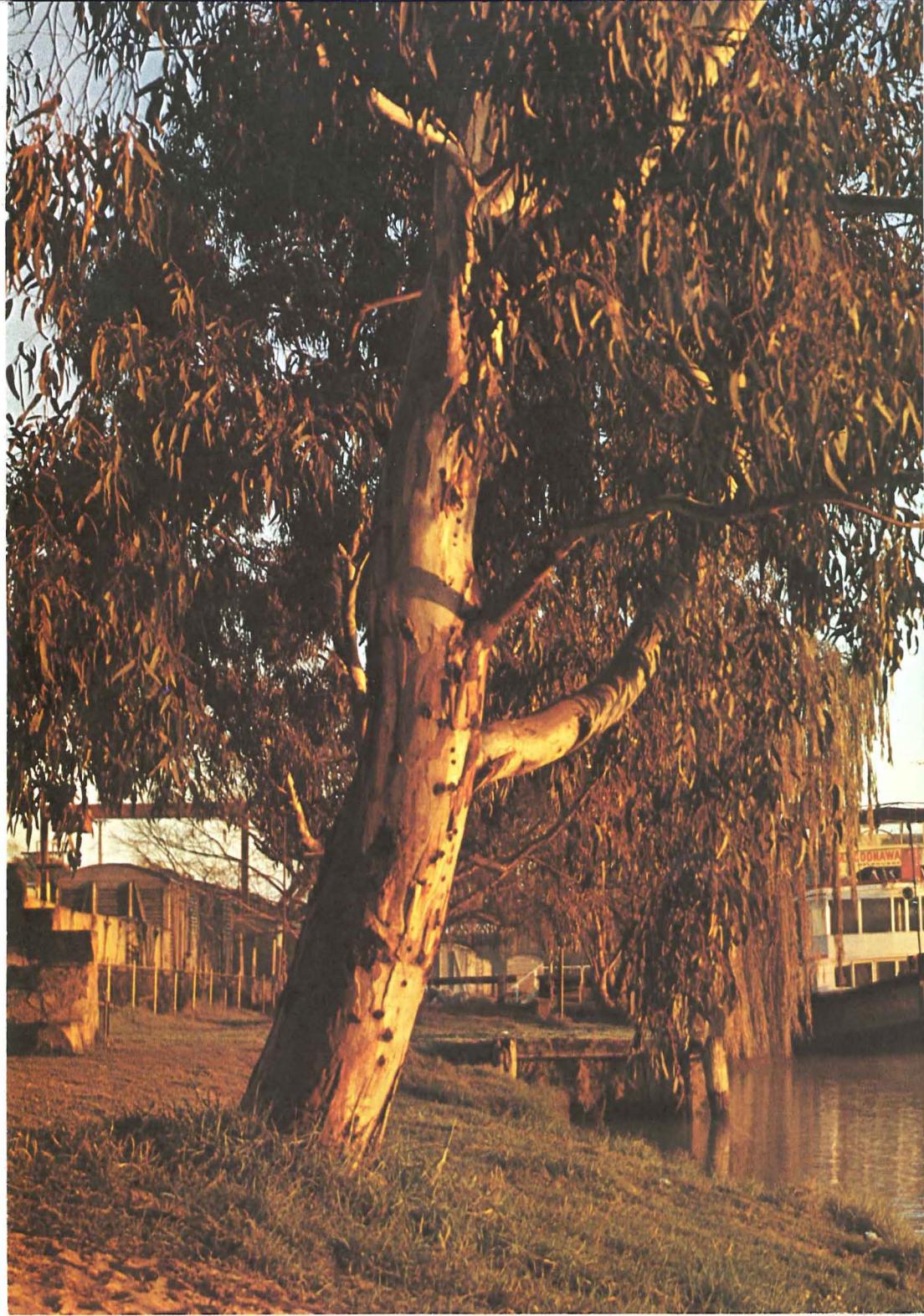
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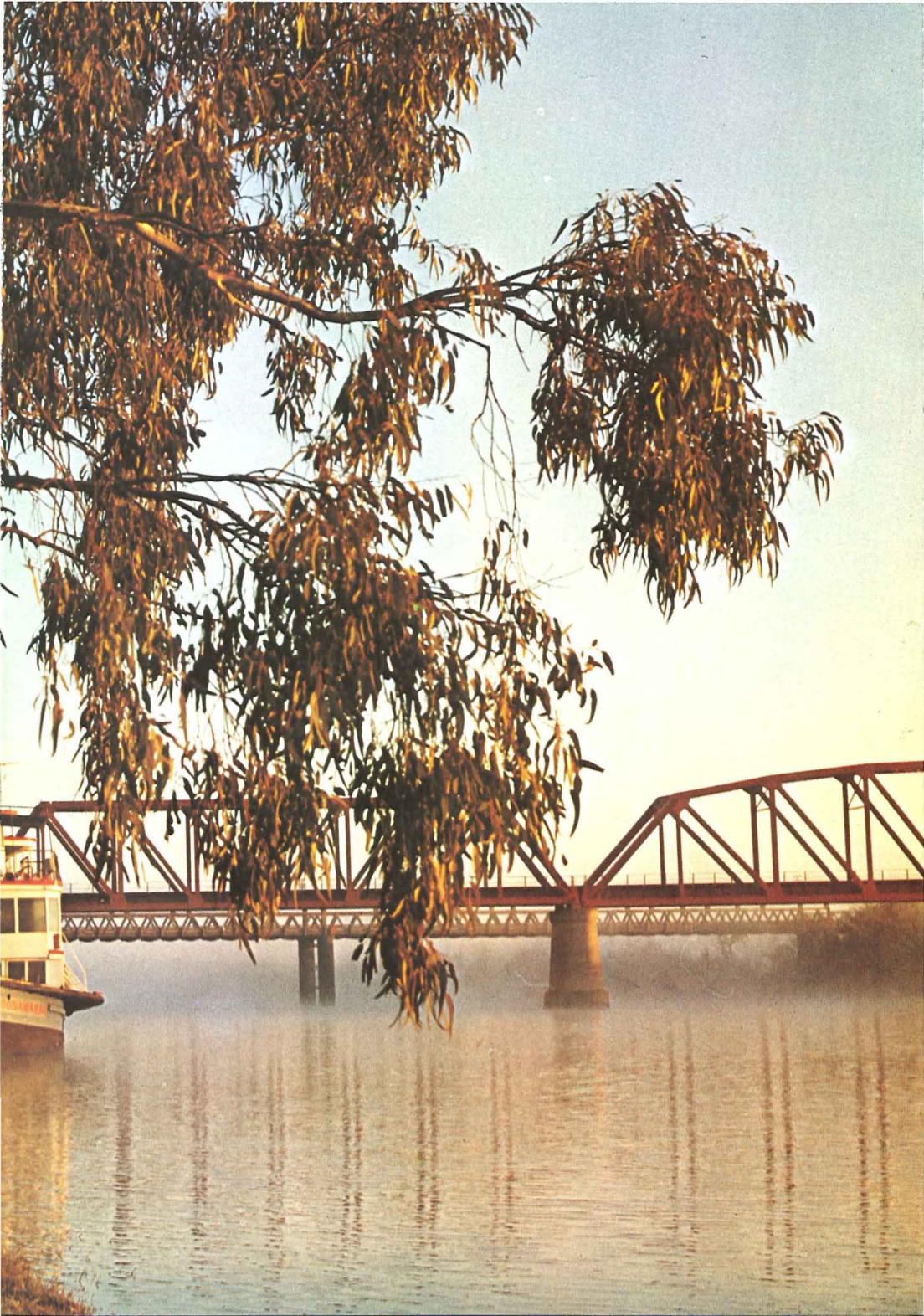
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**SOUTH AUSTRALIAN  
YEAR BOOK  
1980**

An early morning view of the River Murray at Murray Bridge with the PS *Coonawarra* moored and the railway bridge in the background.

Malcolm Harrington





*South  
Australian  
Year Book*

*No. 15 : 1980*

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and Government Statist*

AUSTRALIAN BUREAU OF STATISTICS  
SOUTH AUSTRALIAN OFFICE

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## PREFACE

The *South Australian Year Book* is a general reference work presenting an authoritative and comprehensive statistical and descriptive portrayal of South Australia. It includes studies of the historical and geographical background and of the social, physical and financial development of the State culminating in a picture of South Australia as it is today.

This volume, the fifteenth issue of the Year Book, includes a special article on Vertebrate Fossils of South Australia and a regional study of Murray Lands Statistical Division. Some chapters or portions of chapters have been condensed to make room for the additional material but in such cases appropriate cross-references are given indicating in which earlier volumes the more complete information may be found. A list of special articles which appeared in previous issues is shown on pages 663-4.

Other official statistics of South Australia are published in different media, each chosen as the most appropriate to meet a particular need, whether this be for a compact reference guide, or for more detailed historical or up-to-date data, either on a specific subject or embracing wider fields.

A comprehensive range of statistics is published also by the Australian Statistician covering the whole of Australia (but giving some broad details about the States) and by other Deputy Commonwealth Statisticians for their respective States. The details of such publications are available at each office of the Bureau.

This Office maintains an Information Service, which, on request, supplies available statistical information and advice on which publications are appropriate, and a library in which all publications of the Australian Bureau of Statistics are available for reference. Businessmen, government officers and members of the public are invited to make use of these services.

I gratefully acknowledge the valuable assistance given by contributors of special articles, the Government Printing Office staff, the staff of Griffin Press Limited and Computer Graphics Corporation Pty Ltd. My thanks are tendered to the staff of this Bureau especially Mr I. R. Milne, B.Ec., under whose direction the Year Book was compiled by Mr G. D. Carey, B.Ec., A.A.S.A. (Senior).

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## METRICATION

In this publication quantities are shown in metric units.

1 millimetre	= 0.03937 inches
1 metre	= 3.28083 feet
1 kilometre	= 0.621371 miles
1 hectare	= 2.47105 acres
1 square kilometre	= 0.386102 square miles
1 kilogram	= 2.20462 pounds (lb)
1 tonne	= 0.984207 ton
1 tonne	= 36.7437 bushels of wheat
1 tonne	= 44.0925 bushels of barley
1 tonne	= 55.1156 bushels of oats
1 cubic metre	= 35.3147 cubic feet
1 cubic metre	= 423.776 super feet
1 cubic metre	= 27.4961 bushels
1 litre	= 0.219969 gallons

## EXPLANATORY NOTES

In general, statistics in this volume relate to South Australia. A few tables, which are appropriately footnoted, include details for the Northern Territory.

Values are shown in Australian dollars (\$ or \$A) and cents unless another currency is specified.

Where figures have been rounded, discrepancies may occur between sums of component items and totals.

### Symbols Used

<i>n.a.</i>	not collected, not available for publication
..	not applicable
<i>n.e.c.</i>	not elsewhere classified
<i>n.e.i.</i>	not elsewhere included
<i>n.e.s.</i>	not elsewhere specified
—	nil or less than half the final digit shown
<i>n.y.a.</i>	figures not yet available
<i>p</i>	preliminary
_____	break in continuity of series (where drawn across a column between two consecutive figures)

### Citation of Acts

Acts of the Commonwealth Parliament are cited in *italics* with the relevant year in roman type e.g. *Census and Statistics Act 1905*.

Acts of the South Australian Parliament are cited in roman type e.g. Licensing Act, 1967-1977.

## PART 1

# NATURAL ENVIRONMENT

## 1.1 DESCRIPTION

### Size and Location

The State of South Australia has the Southern Ocean to the south and is flanked on the other sides by land. It lies south of the 26th parallel of south latitude and has as a western boundary the 129th meridian of east longitude. The eastern boundary, north of the River Murray, corresponds with the 141st meridian, while to the south, between the river and the sea, the boundary lies approximately three kilometres to the west of this meridian.

The State is approximately 1 201 kilometres from east to west at the northern boundary and 1 143 kilometres at the head of the Great Australian Bight; from north to south it varies from 630 kilometres near the western extremity to approximately 1 325 kilometres near the eastern boundary; its coastline, excluding islands, measures approximately 3 700 kilometres. South Australia covers a total area of 984 377 square kilometres (one-eighth of the area of the Australian continent); however, approximately one-third of this area has no significant economic use and over one-half is devoted to extensive pastoral pursuits. Approximately 99 per cent of the population live south of the 32nd parallel.

A comparison of the areas, length of coastline and standard time of the various States and Territories is shown in the following table. The areas and length of coastline were determined by the Division of National Mapping by manually digitising these features from the 1:250 000 map series of Australia. This means that only features of measurable size at this scale were considered. About 60 000 points were digitised at an approximate

spacing of 0.5 kilometres. These points were joined by chords as the basis for calculation of areas and coastline lengths by computer.

#### Area, Coastline and Standard Times, Australia

State or Territory	Estimated Area (a)		Length of Coastline (a)	Standard Time	
	Total	Percentage of Total Area		Meridian Selected	Ahead of G.M.T.
New South Wales .....	802	10.43	1 900	150°E	(b) 10-0
Victoria .....	228	2.96	1 800	150°E	(b) 10-0
Queensland .....	1 727	22.48	7 400	150°E	10-0
<b>South Australia</b> .....	<b>984</b>	<b>12.81</b>	<b>3 700</b>	<b>142°30' E</b>	<b>(b) 9-5</b>
Western Australia .....	2 526	32.87	12 500	120°E	8-0
Tasmania .....	68	0.88	3 200	150°E	(b) 10-0
Northern Territory .....	1 346	17.52	6 200	142°30' E	9-5
Australian Capital Territory .....	2	0.03	35	150°E	(b) 10-0
<b>Australia .....</b>	<b>7 682</b>	<b>100.00</b>	<b>36 735</b>	<b>..</b>	<b>..</b>

(a) As determined by the Division of National Mapping.

(b) Because of 'daylight saving' an hour should be added from late October to early March.

#### Standard Time

In terms of The Standard Time Act, 1898 South Australia has used 'the mean time of the meridian of longitude one hundred and forty-two and a half degrees east of Greenwich' as standard time since 1 May 1899. This time, known in Australia as Central Standard Time, is nine hours thirty minutes ahead of Greenwich Mean Time, one hour thirty minutes ahead of Western Standard Time used in Western Australia and thirty minutes behind Eastern Standard Time used by States on the east coast of Australia.

Before 1 February 1895 the meridian of Adelaide 138° 35' east (*i.e.* 9 hours 14 minutes ahead of Greenwich) was used to determine standard time in South Australia and subsequently from 1 February 1895 to 30 April 1899 the meridian 135° (*i.e.* 9 hours ahead of Greenwich) was used.

The Daylight Saving Act Amendment Act, 1972, assented to on 12 October 1972, provided for the observance of daylight saving in the summer of 1972-73, and in each subsequent summer, from the last Sunday in October until the first Sunday in March, South Australian summer time being adopted during this period.

A special article on the basis of time keeping and the determination of time standards was included on pages 1-2 of the *South Australian Year Book* 1973. An article on the determination of the time of sunrise and sunset was included on pages 3-5 of the same issue.

#### Physical Features

South Australia is a land of generally low relief, the inland area being largely covered by featureless plains, or sand and gibber deserts. Approximately 50 per cent of the State is less than 150 metres above sea level and over 80 per cent is less than 300 metres. Even the dominant mountains, the Mount Lofty-Flinders Ranges system, nowhere exceed 1 200 metres and have at no point proved difficult barriers to communications.

On the other hand the pattern of communication and development has been greatly influenced by the nature of the coastline, the south-easterly trend of which is interrupted by two major indentations, Spencer Gulf and Gulf St Vincent. These two relatively

shallow depressions cut into the settled areas a distance of approximately 300 and 150 kilometres respectively. The resultant natural divisions earlier tended to develop their own centres and many ports were constructed along the coast in spite of the fact that, with the exception of the area between Port Lincoln and Fowlers Bay, the nature of the coastline is not particularly accommodating to port development.

Kangaroo Island, approximately 480 kilometres in circumference and covering 4 350 square kilometres, is the predominant island off the South Australian coastline. There are, however, approximately 100 islands in all, relatively few of which are utilised.

The effect of the vast ocean area to the south is a more temperate climate than would be suggested by the latitude while the trend of the coastline exposes the coastal areas to the westerly rain-bearing air streams.

The most important mountains are the Mount Lofty-Flinders Ranges system. Kangaroo Island structurally belongs to these ranges which, together with parallel subsidiary ranges, extend north from Cape Jervis some 800 kilometres to the northern end of Lake Torrens. In the south the rounded hills of the Mount Lofty Ranges are of comparatively low altitude with Mount Lofty, the highest peak, being 727 metres. The western side of these ranges presents steep scarps to the Adelaide Plains while on the eastern side more gentle slopes merge into the Murray Basin.

To the north the Flinders Ranges are of greater height and sharper outline than their southern counterpart. St Mary Peak of 1 166 metres is the highest point. North of Peterborough there is a divergence from the main range which stretches *via* the Olary Ridges to the Barrier Range and Broken Hill. In the far north the ranges again diverge; one spur circling the northern end of Lake Torrens and the other ending north of Lake Frome. The Flinders Ranges contain some unusual basins of which Wilpena Pound is perhaps the best known.

The Mount Lofty-Flinders chain has an important climatic influence which results in higher rainfall in the plains to the west of the ranges, and in the ranges themselves, with relatively dry conditions in the Murray Basin.

The western half of the State is largely occupied by a low plateau over which an intermittent series of low ranges, including the Warburton, Stuart, Denison, Peake, and Everard Ranges, stretch from the Flinders to the somewhat higher Musgrave Ranges in the far north-west. Mount Woodroffe (1 440 metres), the highest point in the State, is located in the Musgrave Ranges.

The comparatively low hills of the Gawler Ranges form the northern side of the Eyre Peninsula triangle, and to the west of Whyalla lie the economically important Middleback Ranges. Isolated peaks of volcanic origin are found in the extreme south-east of the State.

The River Murray, which drains approximately one-seventh of Australia, enters the sea in South Australia and is the State's only major river. The fall of the Murray is very slight, dropping less than 22 metres over the 642 kilometres between the border and the sea. For the 216 kilometres to Overland Corner the river occupies a wide valley and then passes through a narrower steeper-sided valley to Lakes Alexandrina and Albert at its heavily silted mouth.

Surrounding the northern Flinders Ranges is a series of vast lakes which are in reality lakes only after particularly heavy rainfall, normally appearing as shallow depressions with a salt or clay encrusted surface. Lake Eyre, the largest of these, is 15 metres below mean sea level and is fed by a series of intermittently flowing rivers, including the Finke, the Diamantina and Cooper Creek, which traverse the plains of the north-east, constituting one of the largest areas of internal drainage in the world. To the south of Lake Eyre are Lakes Gairdner, Frome and Torrens, the last named being 240 kilometres in length.

### General Geological Background

The physiography of the State very accurately outlines the geological features, the areas of higher relief being the basement rocks protruding as cores or ridges through the flat-lying younger sediments of the basin areas.

The main physiographic feature is the Kangaroo Island-Mount Lofty-Flinders Ranges arc of hills, which, although of no great elevation, extends over a distance of 800 kilometres. The rocks of this arc, which are predominantly ancient sediments, have been folded and faulted in a spectacular manner providing many classic examples of textbook tectonics; they owe their present prominence to repeated fold and uplift movements throughout geological time. The hills of the chain rise from the coastal plains of Gulf St Vincent to the west, the plains of the Murray River to the east, and the Lake Frome and Lake Eyre plains in the north-east and north. The basement rocks are also exposed to the west of Spencer Gulf, but are more completely levelled off, and constitute a geological shield of greater antiquity than the Mount Lofty arc.

In the far north-west of the State, the ancient basement is again exposed in the east-west trending hills of the Musgrave and Everard Ranges. These ranges form the northern boundary of the Great Victoria Desert which, with the great coastal Nullarbor Plain, covers the western half of the State.

There is thus a broad geological picture of ancient crystalline or partly crystalline folded rocks forming highland chains and provinces, surrounded by relatively young and soft flat-lying sediments which have accumulated in deep troughs and basins during periodic transgressions and regressions of the sea throughout most of geological time.

It is in the hard rock provinces that are found the deposits of minerals and rocks which have played an important role in the industrial development of the State. The basin areas are important as sources of artesian water and are the areas in which important oil and natural gas discoveries have been made.

In general, the younger sediments of the basin areas do not provide good agricultural soils except in the higher rainfall areas of the south and south-east of the State, while the best agricultural lands lie in the hard rock provinces of the Gawler-Barossa-Clare regions of the central ranges where relatively good rainfall is associated with more mature soil conditions.

A more complete discussion on the geology of South Australia was included on pages 3-18 of the *South Australian Year Book 1970*.

### Seismicity

The most active area of the Australian continent is that of the South Australian seismic zones. The South Australian area has been monitored since 1962 by a small network of stations operated by the University of Adelaide.

The South Australian epicentres occur mainly in two belts, the major one being within the Adelaide Geosyncline and referred to as the Adelaide Seismic Zone. It extends from Kangaroo Island through the Mount Lofty and Flinders Ranges to Leigh Creek in the north. The epicentres generally follow the ranges and also the western boundary of the Upper Proterozoic Sequence and the fold trends in that part of the Geosyncline curving around to the east of Lake Torrens. The other main South Australian seismic zone is on Eyre Peninsula.

A discussion on earthquakes in South Australia was included on pages 18-19 of the *South Australian Year Book 1970*.

### Eclipses

A special article on eclipses was included on pages 5-11 of the *South Australian Year Book 1977*.

## 1.2 CLIMATE AND METEOROLOGY

In the Southern Hemisphere, because of the extensive ocean areas and the absence of a broad land mass connecting the Antarctic with the tropical regions, the southern continents are not subject to the same range of weather extremes that are experienced in northern countries at similar latitudes. The ameliorating effect of this land-sea distribution is particularly noticeable in southern South Australia.

Briefly, the basic features of the South Australian climate are hot, dry summers with relatively mild nights, and cool but not severe winters with most rainfall occurring during the months of May, June, July and August.

### METEOROLOGICAL OBSERVATIONS

Meteorological services throughout Australia are administered by the Commonwealth Bureau of Meteorology and the Regional Office of the Bureau in Adelaide directs operations throughout the State. In South Australia daily weather reporting stations are established at nearly 80 representative localities and there are over 900 rainfall recording stations.

Station weather observations telegraphed several times a day provide the basic information for the weather forecasting and warning services provided by the Regional Forecasting Centre, Adelaide. These observations are also collated in bulletins, maps and reports issued for public information. The reports include climatic surveys which are studies of climatic variations over defined regions of the State.

### RAINFALL

#### Average Annual Rainfall

South Australia is by far the driest of the Australian States and Territories with just over four-fifths of the State receiving an average of less than 250 millimetres of rain annually. An indication of the shortage of rain in the State is given in the following table which compares the relative distribution of rainfall in South Australia and in Australia as a whole.

Distribution of Rainfall, South Australia and Australia

Average Annual Rainfall	Proportion of Total Area	
	South Australia	Australia
Under 250 mm .....	Per cent 82.6	Per cent 38.8
250 mm and under 400 mm .....	9.1	19.8
400 mm and under 500 mm .....	4.5	11.2
500 mm and under 600 mm .....	2.6	9.5
600 mm and under 750 mm .....	0.8	7.5
750 mm and under 1 000 mm .....	0.4	6.2
1 000 mm and over .....	(a)	7.0
Total .....	100.0	100.0

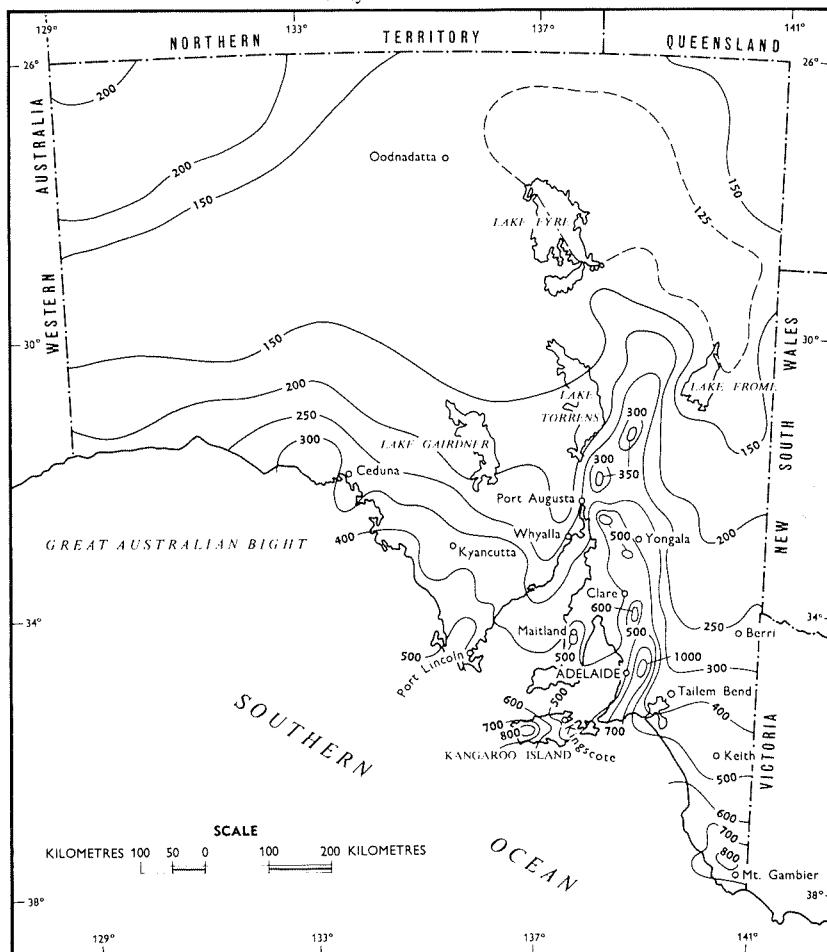
(a) Less than 0.05 per cent—an area of the order of 750 hectares in the Mount Lofty Ranges.

Over the southern half of South Australia the main source of rain is from showers associated with unstable moist westerly airstreams occurring fairly regularly during winter. The wettest part of the State is in the Mount Lofty Ranges, immediately east of Adelaide in the vicinity of Mount Lofty, where the average annual rainfall is about 1 200 millimetres. The Flinders Ranges have the effect of extending a strip area of higher rainfall well to the north.

### SOUTH AUSTRALIA AVERAGE ANNUAL RAINFALL

Based on all years of records

Isohyets in millimetres



As can be seen from the map on page 6, the isohyets generally show highest annual averages along the ranges and southern parts of the coast. The means decrease rapidly to less than 250 millimetres within 150 to 250 kilometres inland, and then decrease more gradually to below 125 millimetres in the vicinity of Lake Eyre. This area is the driest part of Australia and there have been several periods when the annual totals were less than 75 millimetres during consecutive years.

Mean monthly rainfalls at seventeen selected recording stations are shown in the table below. The average number of days receiving 0.2 millimetres or more of rain is also shown.

**Mean Rainfall and Days of Rain: Selected Stations, South Australia**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
MEAN RAINFALL ( <i>a</i> ) (millimetres)													
Adelaide (West Tce) .....	20	21	24	44	68	72	66	61	51	44	31	26	528
Berri .....	17	22	11	17	28	26	24	27	27	24	20	19	262
Ceduna .....	11	14	13	21	38	37	40	37	29	27	23	20	310
Clare .....	26	25	25	48	75	80	81	79	72	57	36	29	633
Keith .....	19	23	22	35	56	52	54	56	51	45	33	26	472
Kingscote .....	15	18	18	37	60	73	78	64	46	36	24	19	488
Kyancutta .....	13	19	13	20	36	40	43	42	34	28	23	19	330
Maitland .....	18	22	20	43	64	68	66	62	50	43	28	22	506
Mount Gambier .....	24	32	33	60	75	77	102	90	68	63	47	38	709
Oodnadatta .....	23	35	8	10	15	13	11	11	12	15	9	13	175
Port Augusta .....	15	17	17	19	26	27	20	23	22	23	18	16	243
Port Lincoln .....	14	15	19	36	58	74	77	67	50	35	23	18	486
Port Pirie .....	18	19	17	29	40	41	33	36	34	33	23	20	343
Stirling .....	39	37	43	96	143	183	161	156	124	99	61	48	1 190
Taihem Bend .....	18	24	21	28	42	39	39	41	39	38	29	27	385
Whyalla .....	19	24	16	18	27	25	22	25	25	27	23	20	271
Yongala .....	21	21	16	26	36	41	40	45	39	34	28	24	371
AVERAGE NUMBER OF DAYS OF RAIN ( <i>b</i> )													
Adelaide (West Tce) .....	4	4	5	9	13	15	16	16	13	11	8	6	120
Berri .....	3	3	3	5	7	8	9	9	7	6	4	4	68
Ceduna .....	3	4	4	7	11	11	13	12	10	8	6	5	94
Clare .....	4	4	5	8	12	14	15	15	13	11	7	5	113
Keith .....	4	4	5	8	12	13	15	15	12	11	8	6	113
Kingscote .....	3	4	5	9	13	15	18	16	13	10	6	5	117
Kyancutta .....	3	3	4	7	11	11	14	14	11	9	6	5	98
Maitland .....	4	4	4	8	12	14	15	15	12	10	7	5	110
Mount Gambier .....	8	8	11	15	18	18	22	21	18	17	14	12	182
Oodnadatta .....	3	3	2	2	3	3	2	4	3	3	3	3	34
Port Augusta .....	2	2	3	4	6	8	8	8	6	6	4	3	60
Port Lincoln .....	4	4	5	9	14	16	18	18	13	11	7	5	124
Port Pirie .....	3	2	3	5	8	10	10	10	8	7	5	4	75
Stirling .....	6	6	7	13	15	17	18	18	15	14	11	9	149
Taihem Bend .....	4	4	4	7	11	11	13	13	11	9	7	6	100
Whyalla .....	3	3	3	5	7	7	8	8	6	6	4	4	64
Yongala .....	4	3	4	6	10	12	13	13	10	8	6	5	94

(a) For all years of record to end of 1978 except for Adelaide (see page 16). (b) Days receiving 0.2 millimetres or more.

#### Seasonal Distribution of Rainfall

Those areas of the State with the higher average annual totals also show a marked winter maximum of rainfall. From November to March the fall is slight, but rarely is completely absent. However, a high rate of evaporation during the summer means that in general these summer rains are not significant from the agricultural point of view. The first significant falls generally arrive during April or May; June, July and August are usually the wettest months, with rains tending to show a marked decrease during September and October.

By contrast, the occurrence of rain over interior districts is quite erratic, but southern parts of the interior still exhibit a discernible trend for winter maxima. Records collected over the years from this northern half of the State show that heavy rains of up to 75

millimetres may occur in any month of the year, but on the other hand at least two or three months without any significant rain at all are experienced practically every year.

### Rainfall Intensity

Long sustained periods of intense rainfall are rare in South Australia. However, occasionally there are very intense falls lasting only a few minutes—for example in Adelaide several falls at a rate of more than 100 millimetres an hour over a five-minute period have been recorded. These would have been thunderstorm rains, and intense falls can cause considerable damage to crops and to light or freshly worked soils.

The most notable falls of rain which have occurred within a period of 24 hours ending at 9 a.m. were at:

Stansbury (18 February 1946) .....	222 mm
Stirling (17 April 1889) .....	208 mm
Ardrossan (18 February 1946) .....	206 mm
Oodnadatta (9 February 1976) .....	200 mm
Carpa, 25 km SW of Cowell (18 February 1946) .....	199 mm
Innamincka Station (28 January 1974) .....	189 mm

Other Yorke Peninsula towns besides Stansbury and Ardrossan also recorded over 175 millimetres on 18 February 1946. These, however, are very much below the 24-hour falls which have been recorded in tropical parts of Queensland and Western Australia. At Bellenden Ker (in Queensland) 1 140 millimetres were recorded in the twenty-four hour period ending 9 a.m. on 4 January 1979. The next day a further 807 millimetres were recorded at the same station. More than twenty other centres in Queensland have had daily readings exceeding 600 millimetres.

### Snow and Hail

The occurrence of snow in South Australia is infrequent and is mainly confined to the Mount Lofty Ranges and southern Flinders Ranges. Most falls are very light and do not persist for a very long period because of the relative warmth of the ground. Collated reports of snow in the Mount Lofty Ranges show a total of 133 days of snow experienced over a period of 139 years to the end of 1979. While most falls have occurred during the months June to September snow has been experienced as early as 25 April (1916) and as late as 3 December (1955).

Hail falls most frequently about the southern coasts and ranges during the winter. Further to the north, hail can be experienced with summer thunderstorms and some of the largest hailstones have been reported from northerly parts of the State. Tornadoes and tornadic squalls are, in almost all cases, accompanied by hail.

### Floods

Various areas of South Australia are prone to localised flooding. However, most local flooding is associated with intense rainfall, and consequently, is of comparatively short duration. Exceptions have occurred in parts of the south-east and far north of the State where, because of topography and other soil factors, stretches of water can persist for days and even weeks.

Extensive rises in the River Murray levels have at times caused damage to levees and installations along the banks. During 1956, following an excessive snow melt in the Australian Alps, prolonged flooding was experienced in many areas adjacent to the main course.

### Droughts

When dry conditions persist over wide areas for long periods of time, drought, the worst of all Australian climatic hazards, is experienced. The worst years in South

Australia were 1863-67, 1896-98, 1901-03, 1913-16, 1926-30, 1939-40, 1943-45, 1959-62 and 1965 in the interior, and 1859-60, 1884-86, 1895-98, 1911-15, 1928-29, 1943-45, 1959, 1967 and 1976-77 in the settled areas.

The driest year in terms of actual rainfall was 1967, when an all-time low figure for the year of 257 millimetres was recorded in Adelaide. However, the 1914 drought is generally recognised as being the most severe experienced, and in that year districts where drought was almost unknown were seriously affected. The average wheat yield fell to only 0.09 tonnes per hectare, little more than one tenth of the yield in previous seasons. In places the River Murray was just a series of waterholes.

The northern areas suffer more frequent droughts than areas near the coast. In 1896 the track north-west of Port Augusta was closed to all traffic because of the drought stricken nature of the country. At about this time the drought was particularly severe in the north-east of the State, and this pastoral country was entering its eighth consecutive year of drought before relief rains fell in March 1902.

A more detailed discussion with special reference to rainfall deciles was included on pages 8-10 of the *South Australian Year Book* 1967. Further details of droughts appear in the Bureau of Meteorology publications *Droughts in Australia* by J. C. Foley (Bulletin No. 43) and *Rainfall Deciles as Drought Indicators* by W. J. Gibbs and J. V. Maher (Bulletin No. 48).

### Rainfall Probability

A special article on rainfall probability, *i.e.* the likelihood, expressed as a percentage, that a minimum rainfall will be received during a stipulated period, was included on pages 6-9 of the *South Australian Year Book* 1966.

## TEMPERATURE

### Seasonal Temperature Conditions

Air temperature is normally recorded under standard conditions in a Stevenson Screen. Isotherms of the average maximum temperatures in a mid-summer month (January) and of the average minimum temperature in a mid-winter month (July) are shown on the maps on pages 11 and 12 respectively. The isotherms are more or less parallel to the coastline but the cooling effect associated with higher altitudes of the Mount Lofty and Flinders Ranges is clearly shown.

From December to February it is generally warm to hot throughout the State but sea breezes frequently bring some relief to the coastal districts. In locations more than 75 to 150 kilometres inland maximum daily temperatures usually exceed 32.5°C and are quite often over 37.5°C. In general, areas to the north of the 32.5°C isotherm on the January map average more than 20 days annually during which the maximum temperature exceeds 37.5°C; while it is only on the extreme south-east coastal fringe and Kangaroo Island where the average number of such 'very hot days' is less than five a year. Air masses prevalent at this time of the year are relatively dry; hence cooling during the night is marked—a fall of 10°C to 20°C from day to night is usual.

During March temperatures begin to fall and continue to do so during April and May, the first frosts of the year often being experienced during this period. The three coldest months are June, July and August, with the coldest areas along the highlands. In those parts of the State east and south-east of the ranges, the mean temperature for the latter months is near or just below 10°C, and these low temperatures cause vegetation growth to become very slow, although it does not cease altogether.

In the spring months, September to November, with gradually rising temperatures and longer hours of sunshine, crops and pastures grow rapidly. In this period severe frosts

are sometimes experienced and these can cause considerable damage to fruit crops during the bud, flower and small fruit stages. When hot, dry, northerly winds persist over the State for two or more consecutive days, developing crops may suffer stress.

Monthly mean maximum and minimum temperatures at seventeen selected recording stations within the State are shown in the following tables. These are based as nearly as possible on a standard period except for the figures for Adelaide (Kent Town) which are estimates based on a comparison of readings taken between 1977 and 1979 at the Kent Town and West Terrace sites.

#### Mean Maximum Temperatures: Selected Stations, South Australia

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
°Celsius													
Adelaide (Kent Town) .....	28.8	28.8	26.2	22.1	18.5	15.6	14.9	16.1	18.4	21.5	24.7	27.2	21.9
Berri .....	31.2	30.2	28.2	22.6	18.9	15.9	15.4	17.2	20.7	23.5	26.9	29.6	23.4
Ceduna .....	28.5	27.9	26.5	24.0	20.7	18.2	17.3	18.3	21.2	23.5	25.8	27.2	23.3
Clare .....	29.4	29.1	26.2	21.3	16.9	13.8	12.9	14.5	17.3	20.8	24.6	27.5	21.2
Keith .....	29.9	29.5	26.9	22.2	18.0	15.5	14.8	15.9	18.4	21.3	24.4	27.4	22.1
Kingscote .....	23.5	23.3	22.0	19.6	17.2	15.2	14.4	14.8	16.3	18.3	20.4	22.3	18.9
Kyancuta .....	32.8	32.0	30.0	25.0	21.0	17.7	17.7	18.1	21.6	25.0	28.3	30.8	24.9
Maitland .....	28.5	28.2	25.5	21.9	17.7	15.3	14.2	15.1	17.2	20.9	23.9	25.9	21.2
Mount Gambier .....	25.1	24.6	22.7	19.0	15.7	13.7	13.0	13.9	15.6	17.6	19.8	22.5	18.6
Oodnadatta .....	37.3	36.2	33.6	28.0	22.9	19.7	19.5	21.6	26.0	30.1	33.4	36.1	28.7
Port Augusta .....	32.0	31.8	29.6	25.2	21.1	17.5	17.0	19.0	22.4	25.6	28.6	30.8	25.0
Port Lincoln .....	25.3	24.9	23.9	21.4	18.8	16.4	15.8	16.5	18.1	20.0	21.9	23.7	20.6
Port Pirie .....	31.7	31.4	29.4	24.6	20.2	17.1	16.3	17.9	20.7	24.4	27.4	29.9	24.3
Stirling .....	24.9	24.3	22.8	18.0	14.4	11.6	10.6	11.8	14.6	16.9	19.9	22.6	17.7
Taihem Bend .....	29.5	28.7	26.9	23.1	18.9	16.2	15.6	16.6	19.8	22.4	24.8	27.0	22.4
Whyalla .....	28.6	28.3	25.7	23.0	20.0	17.6	16.4	17.7	20.2	22.4	25.5	26.7	22.9
Yongala .....	29.9	29.6	26.6	21.3	16.7	13.1	12.3	14.0	17.3	21.4	25.4	28.4	21.3

#### Mean Minimum Temperatures: Selected Stations, South Australia

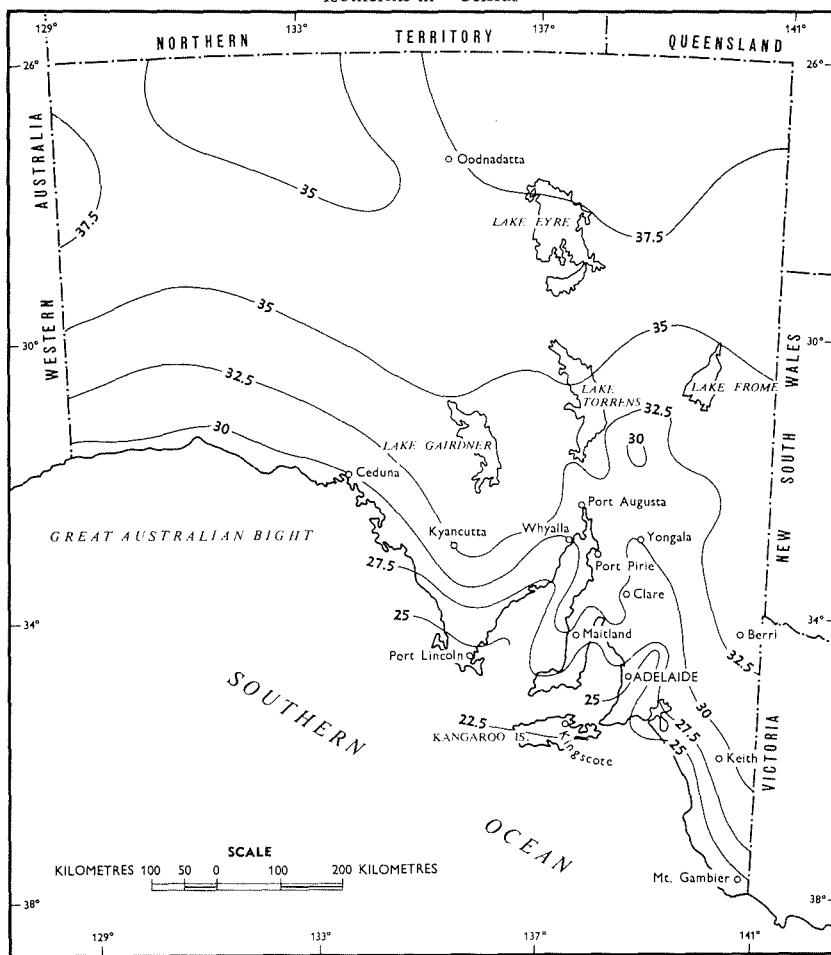
Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
°Celsius													
Adelaide (Kent Town) .....	15.9	16.2	14.5	11.9	9.5	7.5	6.5	7.1	8.4	10.5	12.7	14.8	11.3
Berri .....	15.3	14.9	13.4	10.2	7.8	6.1	5.3	6.0	7.8	10.0	12.2	14.1	10.3
Ceduna .....	14.9	14.9	13.0	10.5	8.4	7.0	6.1	6.0	7.6	9.7	11.9	13.7	10.3
Clare .....	13.7	13.8	11.5	8.3	5.8	4.3	3.3	3.9	5.1	7.4	9.9	12.1	8.5
Keith .....	12.6	12.8	11.1	9.0	7.2	5.6	5.2	5.5	6.4	8.1	9.6	11.5	8.8
Kingscote .....	14.6	15.2	14.1	12.3	10.6	9.2	8.3	8.1	8.9	10.2	11.7	13.3	11.4
Kyancuta .....	15.7	14.0	12.2	9.3	7.2	5.2	4.7	4.8	6.1	8.1	10.4	12.6	9.1
Maitland .....	15.1	15.5	14.2	12.1	9.6	7.6	6.8	6.9	7.9	9.8	11.5	13.5	10.9
Mount Gambier .....	10.7	11.4	10.1	8.4	7.0	5.4	4.9	5.1	5.8	6.9	7.9	9.6	7.8
Oodnadatta .....	22.5	22.0	19.2	14.1	9.6	6.7	5.7	7.1	10.9	15.0	18.1	20.9	14.4
Port Augusta .....	18.6	18.9	16.8	13.3	10.1	7.8	6.7	7.7	9.8	12.6	15.3	17.5	12.9
Port Lincoln .....	15.2	15.5	14.6	12.7	10.9	9.2	8.3	8.2	9.0	10.4	12.1	13.8	11.7
Port Pirie .....	17.2	17.4	15.8	12.8	10.3	8.2	7.5	7.9	9.4	11.6	13.9	15.9	12.3
Stirling .....	11.5	11.6	10.6	8.6	6.8	5.3	4.6	4.8	5.9	7.1	8.7	10.2	7.9
Taihem Bend .....	13.8	13.9	12.3	10.2	8.3	6.0	5.5	5.9	7.2	8.8	10.7	12.4	9.5
Whyalla .....	18.1	18.9	17.2	13.6	10.7	8.5	7.4	8.1	9.9	12.6	14.7	16.6	13.1
Yongala .....	13.2	13.4	10.8	7.3	4.7	3.1	2.3	2.7	4.0	6.2	9.2	11.7	7.4

The highest temperature recorded in South Australia was 50.7°C at Oodnadatta on 2 January 1960, and the lowest -8.2°C at Yongala on 20 July 1976.

#### HUMIDITY

'Relative humidity' at a particular temperature is the ratio of the actual vapour pressure to the saturated vapour pressure (at that temperature) expressed as a percentage. Since relative humidity depends not only on the actual water vapour content of the air but also on air temperature, there is a tendency for highest relative humidities to be associated with low temperatures during the early morning hours, and conversely, the

**SOUTH AUSTRALIA**  
**MEAN MAXIMUM TEMPERATURE: JANUARY**  
 Based on all years of records  
 Isotherms in ° Celsius



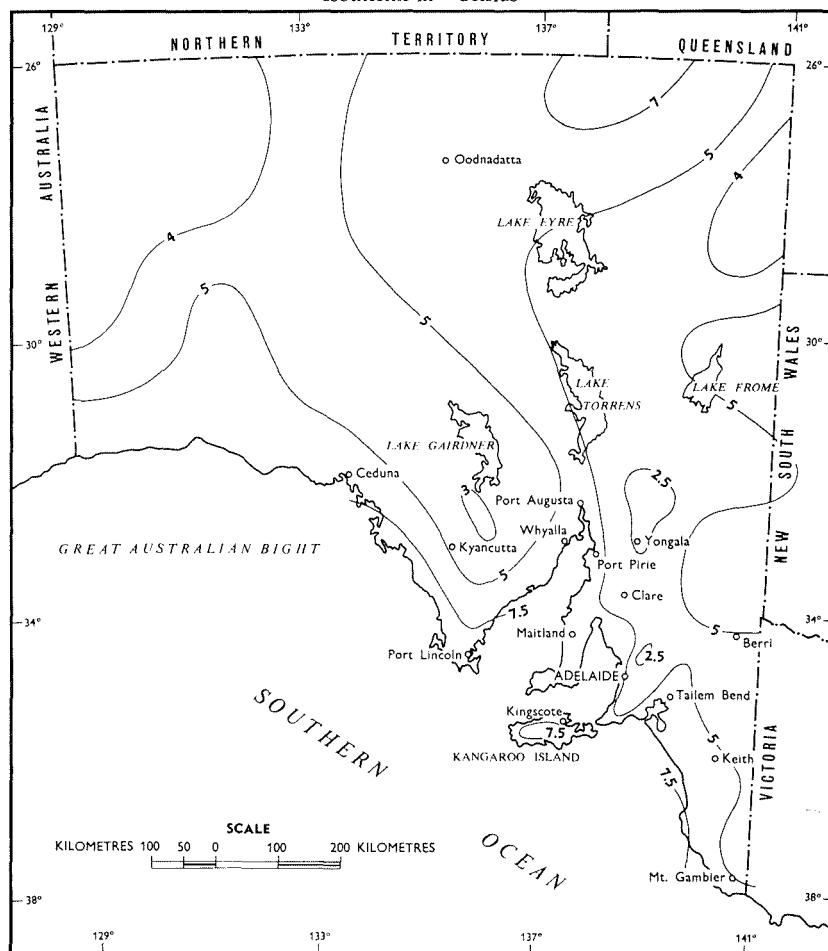
lowest relative humidity values tend to occur during the warmest part of the afternoon when measurements of under 20 per cent are not uncommon.

The average index of mean relative humidity has been derived from the ratio of the average 9 a.m. vapour pressure to the saturation vapour pressure at the average mean

## SOUTH AUSTRALIA MEAN MINIMUM TEMPERATURE: JULY

Based on all years of records

Isotherms in ° Celsius



temperature. Being thus related to the mean temperature this value of relative humidity is a good approximation of the daily mean.

With an average index of mean relative humidity of under 35 per cent in summer increasing to about 50 per cent in winter, the far northern parts of the State experience the lowest values of relative humidity in South Australia. By comparison, most southern

parts of the State have an average index of mean relative humidity of about 45 per cent to 55 per cent in summer, increasing to about 70 per cent to 80 per cent in winter.

### SUNSHINE AND CLOUD

The annual average sunshine total (as determined from records of sunshine and average cloudiness) ranges from about 2 000 hours along parts of the southern coastal fringe to 3 500 hours near the northern border of the State. Adelaide has an average of just over 2 500 hours a year.

December and January tend to be the sunniest months with daily averages reaching a maximum of about 10.5 hours over interior districts. During the June and July winter months daily averages are still as high as seven hours in the far north interior, but over the southern coastal fringe the daily average of just over eight hours for summer is reduced to about three hours during winter.

### WIND

During the summer months winds from the southern quadrants are the most prevalent and a well defined sea breeze is common along the whole of the coastal fringe from October right through to about April and May. During the winter months the north-westerly predominates, but the proportion of west to south-west winds is also relatively high.

South Australia is not subject to the type of sustained wind storms associated with tropical cyclones as in Queensland and tropical Western Australia. However, gales do occur from time to time along the coast during the winter and cause minor damage to buildings and foreshore works. Probably the most noteworthy storm was on 11 April 1948 when wind averaged over 60 km/h for six hours in central and south-eastern districts, the naval frigate *Barcoo* was grounded at Glenelg and the Glenelg jetty was wrecked. Frequent gusts over 100 km/h and a strongest gust of 130 km/h were recorded in Adelaide.

Most violent wind squalls are associated with thunderstorms and usually last only a few minutes. It was during such squalls that the highest wind gusts were recorded in South Australia—167 km/h at Woomera on 14 November 1979, 158 km/h at Woomera on 4 November 1969, 148 km/h at Leigh Creek on 3 December 1953 and also at Adelaide on 13 July 1964.

### EVAPORATION

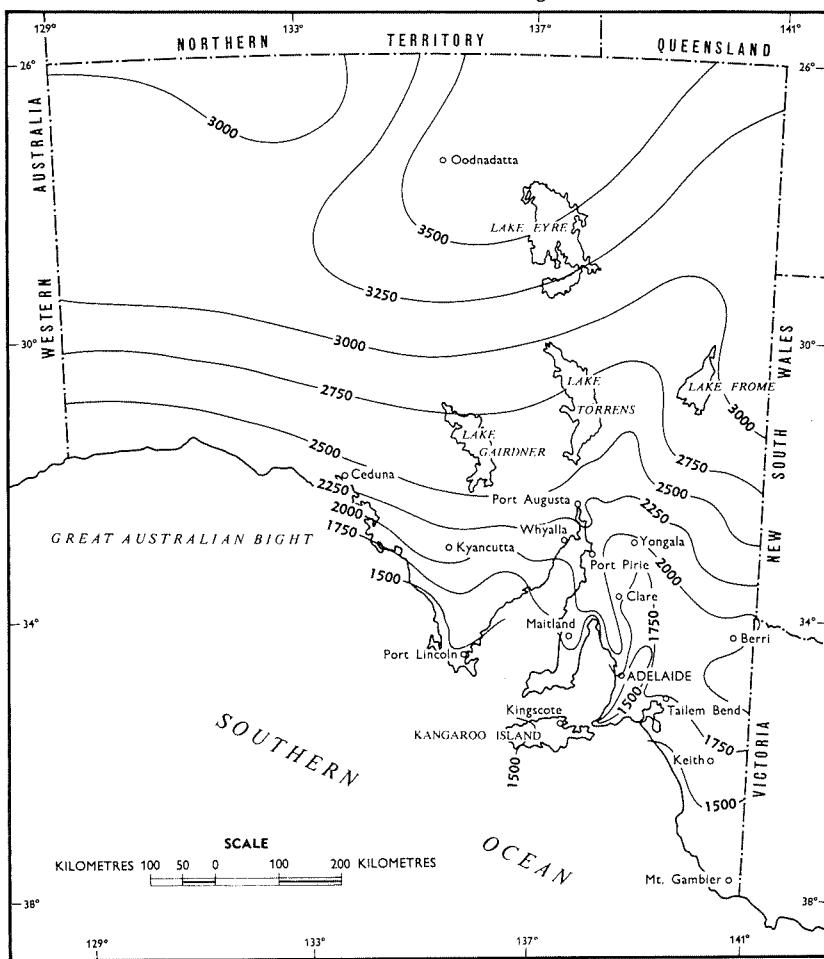
Evaporation is determined by measuring the amount of water evaporated from a free water surface exposed in a standard tank or pan. Before 1967, measurements were made using the sunken tank method *i.e.* tanks, each 0.91 metres internal diameter and 0.91 metres deep, sunk into the soil so that the rim was only 25 millimetres or so above the ground.

Early in 1967 a change-over to the American Class A evaporation pan was made after this instrument had been accepted as the standard evaporimeter for Australia. These pans, 1.22 metres in diameter and 0.3 metres deep, are placed above ground level on wooden pallets. Wire mesh guards are fitted to the pans to prevent birds and stray animals drinking from them. All evaporation figures quoted in this section are for a Class A pan fitted with a bird guard.

The annual average evaporation varies from below 1 500 millimetres in parts of the Mount Lofty Ranges and the lower South East to greater than 3 500 millimetres over an area around and to the north east of Oodnadatta in the far north of the State (see map on page 14).

## SOUTH AUSTRALIA AVERAGE ANNUAL EVAPORATION

Based on all years of records in millimetres,  
for a Class A Pan with Birdguard



About half the State has an average evaporation rate exceeding 3 000 millimetres a year. This high rate is all the more significant when it is considered that the average annual rainfall over most of the northern half is less than 150 millimetres.

### CLIMATE OF ADELAIDE

The longest continuous series of weather observations in the Southern Hemisphere started in Adelaide in November 1836 when Sir George Kingston commenced rain gauge readings at his property on the corner of Grote Street and West Terrace. Unfortunately, the earliest figures were mislaid and records are available only from the beginning of 1839. No other regular observations were made until Sir Charles Todd arrived to fill the post of Superintendent of Telegraphs and Government Astronomer in 1856.

In May 1860 the Observatory on West Terrace was completed and the instruments were moved to that site. For over 100 years the observational site at Adelaide remained practically unchanged. Minor shifts occurred in 1940 and 1962 but these were within 100 metres of the original observatory site.

In February 1977, the Adelaide Regional Office of the Bureau of Meteorology moved from West Terrace to College Road, Kent Town. Although a new observation site was set up at Kent Town, observations continued at the West Terrace site until February 1979 in order to compare the two sites.

Temperature records at Adelaide date from 1857, when readings were first taken from a thermometer placed in a screen known as a Greenwich Stand which failed to protect the thermometer fully from reflected radiation. In 1887 a new series of readings using a standard Stevenson Screen was introduced and this showed maximum temperatures during the warmer months to be 1° to 1.5°C lower on average. Other temperatures were not significantly affected. Both screens were in continuous operation until 1947 when use of the Greenwich Stand was discontinued. However, the Greenwich Stand readings remained the official record until 1947, thus there is a slight discontinuity in the temperature records in that year and means are weighted towards the Greenwich Stand method of measurement. Because of this, comparison with the Kent Town site utilised only Stevenson Screen readings. Statistics derived from the long-standing West Terrace site, now demolished, serve a valuable basis for describing the climate of the City of Adelaide and will continue to be useful guides to the future conditions—figures for West Terrace are therefore shown.

#### Climatological Data, West Terrace, Adelaide

(1) Temperature and Relative Humidity based on a composite record of Greenwich Stand and Stevenson Screen observations

Month	Temperature					Relative Humidity (9 a.m.)		
	Maximum		Minimum		Mean	Mean	Highest Monthly Mean	Lowest Monthly Mean
	Mean	Highest Recorded	Mean	Lowest Recorded				
Years of Record	122	122	122	122	122	109	109	109
January .....	29.5	47.6	16.4	7.3	23.0	41	59	29
February .....	29.3	45.3	16.6	7.5	23.0	44	63	30
March .....	26.8	43.6	15.1	6.6	21.0	47	62	29
April .....	22.7	37.0	12.6	4.2	17.7	57	72	37
May .....	18.7	31.9	10.3	2.7	14.5	67	77	49
June .....	15.8	25.6	8.3	0.3	12.1	75	84	63
July .....	15.0	26.6	7.3	0.0	11.1	76	87	66
August .....	16.4	29.4	7.8	0.2	12.1	70	80	54
September .....	18.9	35.1	9.0	0.4	13.9	61	72	44
October .....	22.0	39.4	10.9	2.3	16.5	52	67	29
November .....	25.1	45.3	12.9	4.9	19.1	45	64	31
December .....	27.7	45.9	15.0	6.1	21.3	42	56	31
Year .....	22.3	47.6	11.9	0.0	17.1	54	87	29

**Climatological Data, West Terrace, Adelaide (continued)**  
 (2) Rainfall and Wind

Month	Rainfall				Wind			
	Mean	Highest Monthly and Yearly Total	Highest in One Day	Mean Days of Rain (a)	Average Speed	Highest Gust	Prevailing Direction	
Years of Record	140	140	140	140	21	60	30	30
January .....	mm	mm	mm	No.	km/h	km/h		
February .....	20	84	58	4	13	116	SW	SW
March .....	21	155	141	4	12	106	NE	SW
April .....	24	117	89	5	11	126	S	SW
May .....	44	154	80	9	11	130	NE	SW
June .....	68	197	70	13	11	113	NE	NW
July .....	72	218	54	15	12	108	NE	N
August .....	66	138	44	16	12	148	NE	NW
September .....	61	157	57	15	13	121	NE	SW
October .....	51	148	40	13	13	111	NNE	SW
November .....	44	133	57	11	13	121	NNE	SW
December .....	31	113	75	8	13	130	SW	SW
Year .....	26	101	61	6	13	121	SW	SW
Year .....	528	786	141	120	12	148	NE	SW

(3) Other Conditions

Month	Mean Daily Sunshine	Clear Days (b)	Mean Amount Of Cloud (c)	Days of Fog	Days of Lightning	Amount of Evaporation (d)	Vapour Pressure 9 a.m.	Mean Barometric Pressure (e)
	Hours	No.	No.	No.	No.	mm	mb	mb
Years of Record	95	58	107	77	105	12	108	121
January .....	10.0	12.4	3.1	0.0	2.0	254	11.9	1 013.2
February .....	9.3	10.9	3.3	0.0	1.7	216	12.5	1 014.3
March .....	7.9	10.9	3.5	0.0	1.7	176	12.0	1 017.2
April .....	6.0	6.6	4.5	0.0	1.4	120	11.5	1 019.9
May .....	4.8	4.6	5.1	0.4	1.5	79	10.8	1 020.1
June .....	4.2	4.0	5.3	1.1	1.5	56	10.0	1 019.9
July .....	4.3	3.6	5.2	1.3	1.4	60	9.5	1 020.0
August .....	5.3	4.9	4.9	0.6	1.7	78	9.7	1 019.0
September .....	6.2	5.7	4.6	0.2	1.7	110	10.0	1 017.7
October .....	7.2	5.7	4.5	0.0	2.6	164	10.2	1 016.0
November .....	8.6	6.6	4.2	0.0	3.0	196	10.5	1 015.0
December .....	9.4	9.0	3.7	0.0	2.2	241	11.3	1 013.3
Year .....	6.9	85.0	4.3	3.6	22.4	1 751	10.5	1 017.1

(a) Days receiving 0.2 mm or more of rain. (b) With less than two-eighths cloud. (c) Scale 0 (clear) to 8 (overcast) at 9 a.m. and 3 p.m. daily. (d) From Class A pan (period 1967-1977). (e) Mean of 9 a.m. and 3 p.m. readings corrected to sea level.

Adelaide is the driest of Australia's capital cities, having less rainfall and a lower relative humidity than any other capital. Summer maximum temperatures are high and the record of 47.6°C in the Greenwich Stand on 12 January 1939 is the highest recorded in any of the capital cities.

#### Temperature

In the summer months, Adelaide maximum temperatures frequently exceed 30°C and from time to time 'heat waves', with readings at or near 35°C for several consecutive days, are experienced. The outstanding heat wave was in January 1939 when fourteen

days out of fifteen exceeded 30°C and of those fourteen days thirteen exceeded 35°C and six exceeded 40°C. During this heat wave the record temperature of 46.8°C recorded on 26 January 1858 was exceeded, first on 10 January 1939 when the temperature reached 47.2°C and then two days later on 12 January when the highest ever temperature of 47.6°C (46.1°C in the Stevenson Screen) was recorded.

July is the coldest month, when the mean maximum is only 15°C with the extreme lowest minimum recorded in the Greenwich Stand being 0°C (0.6°C in the Stevenson Screen) on 24 July 1908. August is only slightly warmer than July, but after August steadily rising temperatures are experienced.

#### Rainfall

Adelaide's summer rainfall is light and unreliable. The average monthly fall from January to March is under 25 millimetres and completely rainless months in this period are not uncommon. In fact, each of the five months December to April has at some time been recorded as completely dry, and in the period January to March 1893 there were sixty-nine consecutive rainless days. On the other hand, heavy rain is occasionally experienced at this time of the year and on 7 February 1925 rainfall was 141 millimetres—a record for one day.

Each month from May to September rainfall averages over 50 millimetres and in this period the rain is fairly reliable. June is the wettest month but the average is still under 75 millimetres for the month. The 140 year annual rainfall average is 528 millimetres, and annual totals have ranged from a low of 257 millimetres in 1967 to a high of 786 millimetres in 1851.

#### Other Conditions

Relative humidity in Adelaide is at its lowest in January when the average 9 a.m. reading (which approximates the average for the whole 24 hours) is 41 per cent. This low value of the relative humidity reduces the severity of heat waves in Adelaide. In fact, the relative humidity is very low for most months of the year, only becoming higher in winter, with the average at 9 a.m. reaching 76 per cent in July.

Adelaide is not subject to violent sustained wind storms. The prevailing wind during the day in summer is a south-westerly sea breeze which is well defined throughout the months October to April. Another common wind during summer, known locally as the 'gully wind', blows from the east or south-east out of the Adelaide hills (more particularly at night) and becomes very strong and gusty at times. In winter the prevailing wind during the day is north-westerly with a high proportion of south-westerlies.

#### Transfer of Bureau of Meteorology to New Site

Temperature and rainfall averages have been estimated for the recently opened Kent Town site. These are shown in the following tables with the long term means for the discontinued West Terrace observations. The temperatures refer only to observations taken from the Stevenson Screen thus eliminating the bias introduced with Greenwich Stand readings.

**Comparison of Rainfall: West Terrace, Adelaide and Kent Town**

Site	Years of Record	Millimetres												Year	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.		
<b>West Terrace, Adelaide:</b>															
Long term mean rainfall .....		140	20	21	24	44	68	72	66	61	51	44	31	26	528
<b>Kent Town:</b>															
Estimates of average rainfall ..		22	22	26	47	76	79	75	69	57	51	33	28	585	

**Comparison of Temperature: West Terrace, Adelaide and Kent Town**

Site	Years of Record	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
		92	28.5	28.5	26.0	22.1	18.5	15.7	14.9	16.0	18.3	21.3	24.3	26.8
*Celsius														
Maximum:														
West Terrace, Adelaide;														
Long term mean														
temperature .....	92	28.5	28.5	26.0	22.1	18.5	15.7	14.9	16.0	18.3	21.3	24.3	26.8	21.7
Kent Town;														
Estimates of average														
temperature .....	..	28.8	28.8	26.2	22.1	18.5	15.6	14.9	16.1	18.4	21.5	24.7	27.2	21.9
Minimum:														
West Terrace, Adelaide;														
Long term mean														
temperature .....	92	16.5	16.8	15.1	12.7	10.4	8.4	7.5	8.0	9.2	11.1	13.1	15.1	12.0
Kent Town;														
Estimates of average														
temperature .....	..	15.9	16.2	14.5	11.9	9.5	7.5	6.5	7.1	8.4	10.5	12.7	14.8	11.3

From these tables the estimated average maximum temperatures at Kent Town vary from 0.4°C higher than at West Terrace in December to 0.1°C lower during June.

Estimated average minimum temperatures at Kent Town are all lower than the corresponding average temperatures at West Terrace. Differences range from 0.3°C in December to 1.0°C in July.

Rainfall has been recorded at West Terrace for 140 years, the longest continuous record in the Southern Hemisphere. The estimated average annual total for Kent Town is 11 per cent higher than at West Terrace. However, monthly means range from 5 per cent higher in February to 14 per cent higher in July.

It follows that it is likely that new extreme temperature and rainfall readings will be recorded for 'Adelaide' at the Kent Town site. Such occurrences should not be compared with extremes that have been recorded at West Terrace. A new series of climatological statistics has been started for the Kent Town site and this will be kept separate from the West Terrace data.

**WEATHER CONDITIONS IN SOUTH AUSTRALIA: 1979****Summer 1978-79**

Strong winds damaged buildings and brought down power lines in the southern settled areas in early December. In January heavy rains closed many roads in northern parts. Heavy rain again caused flooding, particularly in Whyalla and Andamooka during late February when rail links were also cut.

In the pastoral areas the district rainfall averages for summer were 98 per cent above normal for the Far North district, 12 per cent above normal for the North East district while the North West district was 47 per cent below normal.

In the settled areas summer rainfall was close to average over the Adelaide Plains, Yorke Peninsula and the Western Agricultural district. Rainfall was 10 to 20 per cent below normal in the Lower South East and over Kangaroo Island while in the Upper and Lower North, County Light, the Mount Lofty Ranges and the Upper South East districts the averages were between 10 and 40 per cent above normal. Averages varied from 50 per cent above normal in the Murray Mallee to 63 per cent above normal in the Upper Murray Valley.

Summer 1978-79 will probably be remembered as being particularly hot since January temperatures were much higher than average and pronounced hot spells were frequent. Mean summer maximum temperatures were about 0.5°C to 2.5°C above normal.

On 13 January extreme temperatures were recorded at Ceduna, Elliston and Nonning and near record temperatures occurred at several other centres. In Adelaide the maximum temperature was higher than 30°C on nineteen days during January, and reached 42°C on the fourth day of that month.

The mean maximum of 31.4°C was the highest recorded in Adelaide since 1951. Mean maxima during January were about 2°C to 5°C above normal at most centres. During February, maximum temperatures were 1°C to 3°C above normal over most of the western half of the State and close to normal elsewhere.

### **Autumn 1979**

Heavy rains caused flooding on several occasions in interior districts during autumn. A few stations in the North West district received record May rainfall totals. Also in May, a severe local storm unroofed several buildings and toppled fences at Evanston Park and South Gawler.

In the pastoral areas the district rainfall averages for the autumn season were above normal. The North West, Far North and North East were 188, 128 and 31 per cent, respectively, above normal.

In the settled areas, above normal autumn rainfall was only recorded in the Western Agricultural, Upper Murray and the Upper and Lower North districts. The below normal autumn totals received over Kangaroo Island, Yorke Peninsula, the Central and South East districts were largely the result of below normal gaugings recorded during March and May. In the Lower Murray Valley the early autumn months were below normal, resulting in a deficit of 14 per cent for the season. A deficit of 14 per cent was also recorded in the Murray Mallee district.

In summary, the rainfall distribution pattern of May, when northern districts received above normal rainfall and the southern settled areas received below normal rainfall for that month, was generally reflected in the autumn statistics. In the remaining settled areas and in the North East district they ranged from 5 per cent to 65 per cent above normal and in the Far North and North West the district averages were between two and three times the normal for autumn.

Mean autumn maximum temperatures were less than 1°C below normal at most southern and coastal centres and were about 1°C to 2°C below normal in the interior districts and over most upland areas. Mean autumn minimum temperatures were within about 1°C of normal throughout the State.

### **Winter 1979**

June, the first month of winter, was very dry. Some stations received record lowest June rainfall. July rainfall was also below normal in most districts and some agriculturists found it necessary to re-sow their crops.

'Saving rains' came during August when all districts except the Upper Murray Valley received above average rainfall. In most districts the August rains were not sufficient to offset the rainfall deficits accrued during the first two winter months.

In the pastoral interiors the district rainfall averages for the winter season were 11 per cent and 2 per cent above normal in the North West and Far North, respectively, and a deficit of 30 per cent was recorded for the North East district.

In the settled areas the district averages were between 10 and 60 per cent below normal except in the Lower South East where the winter rainfall was slightly (4 per cent) above normal. The greatest deficits of about 40 to 60 per cent occurred in the Upper and Lower

North, the Upper Murray and Murray Mallee districts. Over the Lower South East, the Mount Lofty Ranges and Kangaroo Island most recordings were about 200 millimetres to 300 millimetres with some mainland stations receiving falls of between 300 millimetres to 400 millimetres. Readings of less than 40 millimetres were taken throughout the Murray Mallee district.

Mean winter maximum temperatures were up to about 1°C above normal while the corresponding minima were within about 1°C of normal throughout South Australia.

### Spring 1979

Rainfall during September was above normal in all districts with many stations reporting extremely high readings. Most unsealed roads in northern parts were closed. Strong winds, early in September uprooted trees around Adelaide. Despite the damage caused, the September rains served as a 'follow on' to the late winter rains and were a great benefit to cereal crops. The rains continued in the agricultural regions of the State during October. They caused minor flooding and landslips in the Adelaide Hills and city suburbs during September and October.

November rainfall was also above normal in most districts with a few stations reporting extremely heavy rainfall totals for the month. During mid-November severe thunderstorms with heavy hail caused damage particularly in the Barossa Valley, Virginia and Port Broughton areas. At the same time a fishing boat and its crew were lost near Dangerous Reef. The storms were accompanied by wind gusts exceeding 100 kilometres per hour and caused damage to aircraft at Parafield, Edinburgh and Woomera aerodromes. A gust at Woomera of 167 kilometres per hour was the strongest ever recorded in South Australia.

Spring rainfall was well above normal in all districts except the Upper North and North East where the district averages were close to normal.

In the pastoral areas the average for the North West district was 2.8 times the spring normal. There were some isolated heavy falls which boosted the average and one of these was at Yardea (257 millimetres). The rainfall average for the Far North district was 77 per cent above normal and 2 per cent above normal for the North East.

In the settled areas spring rainfall district averages were close to normal in the Upper North, 60 to 100 per cent above normal over Yorke Peninsula, the Adelaide Plains, Mount Lofty Ranges and the South East districts. They were between 100 and 140 per cent above normal in the Western Agricultural, Lower North, Kangaroo Island, County Light and the Murray districts.

Mean spring maximum temperatures were within 1°C of normal and the corresponding minimum temperatures were close to normal at most centres.

## 1.3 NATURAL RESOURCES

### MINERALS

The opal fields at Coober Pedy, Mintabie, Andamooka and Stuart Creek supply most of the world's precious opal. The estimated value of raw opal production in South Australia was \$40 million in 1979. Most of this is exported to Hong Kong, Japan, USA and Germany.

Iron ore is mined in the Middleback Ranges on Upper Eyre Peninsula. These ranges lie to the west of Whyalla, a coastal port with a steelworks and shipbuilding facilities, and extend discontinuously from Iron Knob in the north to Iron Duke nearly 65 kilometres to the south. In excess of 150 million tonnes of ore have been mined since 1900. Currently production is at the rate of approximately 2.6 million gross tonnes per annum.

Copper ore is being mined at Burra and Mount Gunson by open-cut mining methods and, until recently, at Kammantoo. The Mount Gunson Mine, 145 kilometres north-west of Port Augusta and 56 kilometres south-east of Woomera, is being mined at the annual rate of approximately 500 000 tonnes of ore of more than 2 per cent copper for the production of copper sulphide concentrates for export. The Burra Mine, 161 kilometres north of Adelaide, has the treatment capacity for approximately 300 000 tonnes of ore per annum of 1.5 per cent copper. The copper oxide produced at Burra is used for the production of fertilisers, agricultural chemicals and copper sulphate.

Vast deposits of copper-uranium mineralisation have been discovered at Olympic Dam on Roxby Downs Station, 80 kilometres north of Woomera and 55 kilometres west of Andamooka. Copper-uranium mineralisation, with minor gold and rare earths, has been intersected at a depth of approximately 350 metres and the area has the potential to develop into a very large mining operation.

Leigh Creek coal field, operated by the Electricity Trust of South Australia, is the only deposit which is being mined at present and to date approximately 36 million tonnes of coal have been mined for power generation at the Playford Power Station in Port Augusta. The current production rate is approximately 1.5 million tonnes per annum.

Permian sub-bituminous coal has been defined by drilling at Lake Phillipson, 80 kilometres south of Coober Pedy. The deposit consists of a number of seams in two main elongated troughs which together total approximately 2 000 million tonnes. The Wakefield Tertiary lignite deposits held by the Electricity Trust of South Australia, have estimated reserves of 2 000 million tonnes and a bulk sample is being procured for testing by excavation of a trial pit near Bowmans. Western Mining Corporation Ltd has announced the discovery of brown coal in drilling operations near Kingston, South East which are additional to coal finds by the company in the Victorian portion of the Otway Basin.

Barite is obtained from several localities in the Flinders Ranges. The Oraparinna Mine is the largest producer of industrial grade barite in Australia. Oil drilling grade barite is mined at Mount Mulga, north of Olary and at several deposits in the Flinders Ranges.

The largest part of Australian reserves of gypsum are located in South Australia. The deposits have in general formed in coastal basins, the largest of these occurring at Lake MacDonnell and on Kangaroo Island. Other deposits, mainly of seed gypsum, are found inland at Moonabie, Lake Fowler, Cooke Plains and along the River Murray.

High grade kaolin is produced from weathered shales at Birdwood and altered metasediments at Williamstown in the Mount Lofty Ranges. Sillimanite and damourite (mica) are also obtained from the open-cut at Williamstown. White burning plastic clays are mined near Adelaide at Golden Grove, One Tree Hill and McLaren Vale and clays for refractory and ceramic uses are supplied from Tregolana and Longwood.

High quality dolomite for steel making is quarried at Ardrossan and for glass making at Tantanoola.

Feldspar is being mined from pegmatites north of Olary. Flint for ceramic and grinding purposes is gathered from the beaches near Port MacDonnell and screened from clay at Longwood.

Conditions in South Australia are ideal for the production of salt from sea water by solar evaporation. Large solar salt works are located at Dry Creek (near Adelaide), Port Price (Gulf St Vincent), and Whyalla. Salt is also harvested from several saline lakes, in particular Lake Bumbunga and Lake MacDonnell.

South Australia contains many deposits of limestone and apart from quarries worked for construction purposes the main deposits are at Rapid Bay for steel making, Angaston and Klein Point for cement, Mount Gambier for whiting and building stone, and Penrice for chemicals and cement.

Magnesite is mined on a small scale north-west of Copley.

Monumental stone is produced from white marble at Angaston, black granite from Black Hill, blue granite from Kingston, brown granite from Sienna, and red granite from Calca. Billiard table slate and paving stone is supplied from Mintaro and Jones Hill in the northern Flinders Ranges. Walling and paving stone is also obtained from Willunga and Wistow.

Nephrite jade, which occurs as lenses north-west of Cowell, is mined for ornaments and jewellery, and is also exported in crude form. Banded calcite, used for ornamental purposes, occurs in narrow veins near Warrioota in the Flinders Ranges.

Talc is produced from Mount Fitton in the Flinders Ranges, Gumeracha, Lyndoch and Tumby Bay for use in ceramics and cosmetics.

High grade zinc ore is mined at Puttapa, 30 kilometres south of Leigh Creek as markets allow.

Significant deposits of uranium have been discovered in the Lake Frome region but no mining has commenced.

A special article on the Minerals of South Australia was included on pages 21-39 of the *South Australian Year Book 1975*.

### PETROLEUM RESOURCES

Before the late 1940s South Australia had no satisfactory indigenous source of primary energy. A number of deposits of sub-bituminous coal including those at Leigh Creek, Moorlands, Balaklava and Lake Phillipson were known but none of these were considered worthy of development.

Industrial unrest in the late 1940s led to a growing awareness of the State's dependence on eastern States coal and foreign oil and led to the development of the Leigh Creek coalfield.

The search for petroleum was actively encouraged and assisted from the mid-1950s. This culminated in the discovery of the Gidgealpa gas field in 1963 by Santos Limited and the then Delhi Australian Petroleum Limited.

Following the discovery of a second major gas field at Moomba, a pipeline was constructed from Moomba to Adelaide and came into operation late in 1969.

A revival of petroleum exploration activity in the early 1970s resulted in a number of new discoveries of both gas and oil. An agreement was made with the Australian Gas Light Company Limited to supply gas to the Sydney area, over a 25-year period. Adequate reserves were demonstrated to exist by late 1972, and supply to this new market commenced in December 1976. Twenty gas fields have now been discovered in the South Australian portion of the Cooper Basin and there is considerable potential for further discoveries.

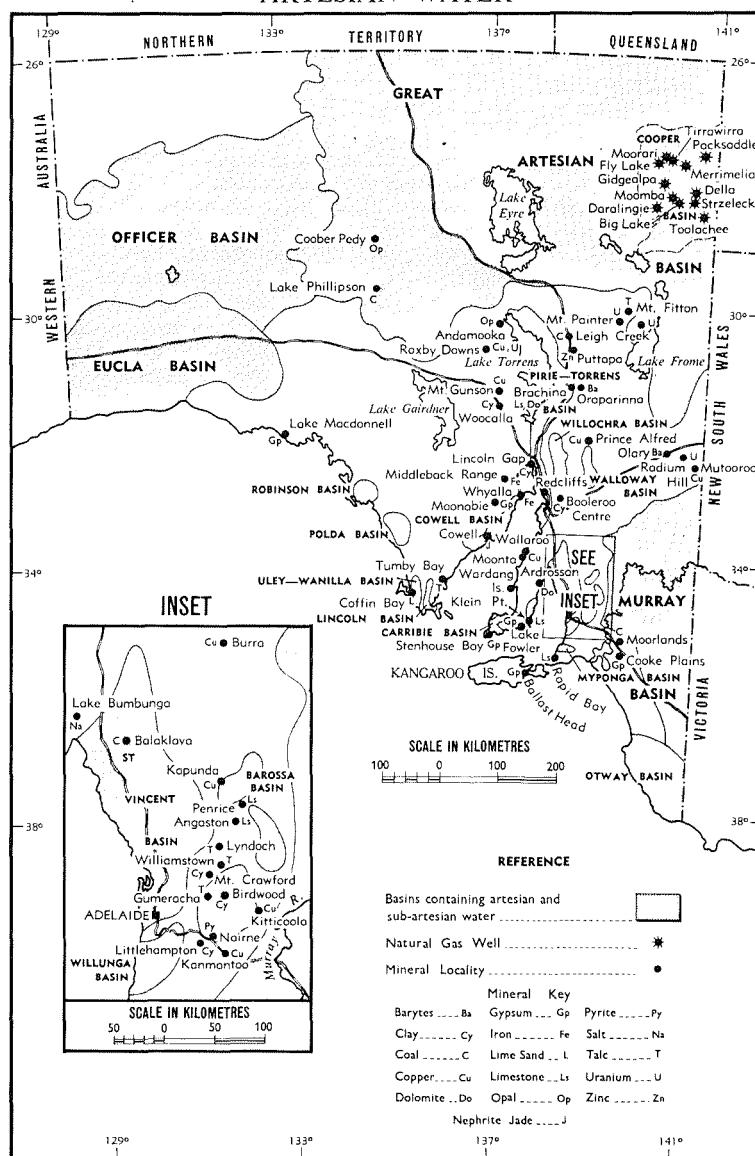
Total reserves of petroleum are estimated to be 93 000 million cubic metres of natural gas and 48 million cubic metres of petroleum liquids.

An interest in the gas reserves and exploration potential of the Cooper Basin and other areas of South Australia included in Petroleum Exploration Licences No. 5 and 6 has been purchased by the South Australian Oil and Gas Corporation Ltd, jointly owned by the State Government and the South Australian Gas Company. An independent exploration program, financed by the Government, is being carried out by the Corporation to further define the State's energy resources.

### UNDERGROUND WATER

South Australia is the driest of the Australian States with more than 82 per cent of its

SOUTH AUSTRALIA  
MINERAL RESOURCES AND  
ARTESIAN WATER



area receiving an average annual rainfall of less than 250 mm. The wettest parts of the State are the south and south-eastern coastal areas and the Mount Lofty-Flinders Ranges. Only small areas of the Mount Lofty Ranges, Kangaroo Island and the lower South East receive more than 600 mm per year. As a consequence of the rainfall pattern, South Australia is notably deficient in rivers. The River Murray, the only large permanent river, originates outside the State. The few streams commencing in the ranges are short and seasonal in flow. In this situation groundwater is of considerable importance and it is estimated that at least 100 000 wells have been drilled or dug in the search for water.

Annual groundwater use in South Australia is estimated to be 357 000 megalitres which is approximately 35 per cent of total water use. The greatest use of groundwater is for irrigation which accounts for an estimated 227 000 megalitres per year. Principal areas of use are the South East, including the Angas-Bremer irrigation area near Langhorne Creek, the Adelaide Plains and the Mount Lofty Ranges. Stock and industry account for an estimated 100 000 megalitres per year, which includes approximately 77 000 megalitres flowing from artesian wells in the Great Artesian Basin.

Most public water supplies in South Australia originate from reservoirs in the Mount Lofty and Flinders Ranges and on Eyre Peninsula and from the River Murray. These sources provide an estimated 92 per cent of reticulated supplies with groundwater supplying the remaining 8 per cent, or approximately 20 000 megalitres per year.

Approximately fifty towns and districts are fully or partly dependent on groundwater for public water supplies. The two main areas of use are the South East and Eyre Peninsula which together account for approximately 93 per cent of groundwater used for public water supplies.

Although saline groundwater occurs over much of the western part of the State there are a number of large sedimentary basins where low salinity groundwater is available. These include the Great Artesian Basin, Murray and Otway Basins and St Vincent Basin. In addition there are a number of smaller basins which are important sources of groundwater for irrigation, town water supplies or stock.

Artesian flows occur in some of these basins but the largest flows are from the Great Artesian and Otway Basins. The Great Artesian Basin has a total area of 1 700 000 square kilometres of which 310 000 square kilometres are in South Australia, covering 30 per cent of the State. The main intake area for the principal aquifer lies along the western margin of the Great Dividing Range in New South Wales and Queensland. Minor intake also occurs along the western margin of the basin in South Australia. Natural outlets for the basin are the mound springs west and south of Lake Eyre. Total discharge from the springs is estimated to be 30 000 megalitres per year. Deep wells are necessary to tap the artesian aquifer, and individual wells may yield 4 500 kilolitres per day or more. The water is generally unsuitable for irrigation because of its chemical composition and it is used mainly for the watering of stock, with town water supplies being a minor use.

The Murray Basin has a total area of 278 000 square kilometres, mainly in Victoria and New South Wales, the area in South Australia being 73 000 square kilometres. The southern and central portions of the basin contain relatively low salinity groundwater suitable for most purposes. Salinity increases steadily in a north and north-westerly direction and the groundwater becomes unusable in the vicinity of the River Murray. Very large yields can often be developed from cavernous limestone aquifers occurring at relatively shallow depth and in some places from sand dunes and other local aquifers. Towns in the central part of the basin are supplied with groundwater, which is also extensively developed for stock supplies and for irrigation. Towns along the western margin, as far south as Keith, are provided with water by pipeline from the River Murray. At Padthaway, an area marginal to the Murray Basin, where groundwater

occurs at shallow depth, annual withdrawal for irrigation is approximately 24 000 megalitres per year.

The Otway Basin in South Australia lies south of Kingston and extends along the southern coast of Victoria. Large supplies of low salinity groundwater are available from the Gambier Limestone aquifer over much of the basin. A deeper confined aquifer provides artesian supplies in the Kingston-Beachport area, the water being used mainly for flood irrigation of pasture, and for town water supplies.

The Eucla Basin, occurring in the south-western part of the State, has an area of 41 000 square kilometres in South Australia, but the greater part (135 000 square kilometres) lies in Western Australia. Little use is made of groundwater from the basin because of its high salinity, but water suitable for stock is available from the limestone aquifer in some areas, particularly near the head of the Great Australian Bight.

The Adelaide Plains Sub-Basin is part of the St Vincent Basin, extending 160 kilometres north of Adelaide, on the western side of the Mount Lofty Ranges. Good quality groundwater is obtainable in certain parts of the plains and it is extensively used for the irrigation of market gardens in the Northern Adelaide Plains. Pumping in this area has greatly exceeded the groundwater recharge rate for a number of years and it is a Proclaimed Region under the Water Resources Act, 1976 and the use of groundwater is subject to controls.

In the Adelaide Metropolitan area the reticulated water supply has been augmented by groundwater on a number of occasions since 1915, the last time in 1967-68 when 9 500 megalitres were pumped over a seven month period.

Other small basins within or adjacent to the St Vincent Basin include Willunga and Noarlunga embayments and Myponga and Hindmarsh Tiers areas. In all these areas groundwater is used for stock and increasingly for irrigation.

The Pirie-Torrens Basin extends from Port Broughton to the northern end of Lake Torrens. Groundwater from the basin is used mainly for stock except in the Nelshaby-Napperby area east of Port Pirie where it is suitable for the irrigation of market gardens.

The Willochra and Walloway Basins located near Quorn and Orroroo respectively, also provide mainly stock water supplies. However, there is limited irrigation of pastures in both basins. In the Barossa Valley groundwater generally has a low salinity and it is being used increasingly for irrigation of vines.

There are several important groundwater basins on Eyre Peninsula including Lincoln, Uley-Wanilla, Uley South and Polda Basins. They provide more than half the water for the reticulation system covering much of Eyre Peninsula. The fractured rocks of the Mount Lofty Ranges contain significant groundwater resources which are used for irrigation in several areas e.g. Piccadilly Valley.

The exploration and testing of the groundwater resources of the State is a continuing responsibility of the South Australian Department of Mines and Energy, which provides the services of geologists and an extensive drilling organisation. Pamphlets on the groundwater occurrences throughout the State, particularly those in the more important basins are published by the Department.

The Water Resources Act, 1976, administered by the Engineering and Water Supply Department, covers the drilling for and development of groundwater over the whole State.

## SOILS

### General

There are many kinds of soils in South Australia ranging from free-flowing sands such as the coastal dunes, to the shrinking and swelling clays of which good examples are

found near Bordertown and Tanunda, while some show a marked textural contrast with depth, such as the sand over clay soils of the South East. Not only do these soils differ in their visible attributes, such as their colour, texture, stoniness and degree of slope, but also in the properties, largely unseen, of their chemistry, their relations to air and water, and to the micro-organisms which form the soil flora and fauna.

Undoubtedly the most widespread deficiency is phosphorus—low phosphorus contents are typical of South Australian soils. The gravelly ironstone soils of Kangaroo Island and parts of the Adelaide Hills are among the most impoverished in the world, containing only between 5 and 40 parts per million of phosphorus in their surface soils, whereas the red-brown earths in their natural state contained 200 to 300 parts per million. These figures do not compare favourably with those for the soils of Great Britain, in which 600 parts per million of phosphorus is common. However, soils are changed by the treatment they receive and the phosphorus content of soils in some areas has been so built up over the years that its residual effect is now sufficient to produce a good cereal crop without the further addition of superphosphate.

On the other hand, prolonged clean cultivation in vineyards and frequent cropping in wheatland areas causes deterioration of the structure of surface soils and depletion of nitrogen. The latter deficiency can be remedied by the proper use of legumes, such as medics and clovers, during the pasture phase of the crop rotation in wheatlands. Nitrogen is one of the most mobile of the nutrient elements in soil and is highly susceptible to differences in management.

Some soils which seem to be unique to Australia, such as the mallee soils or calcareous earths, are well represented in this State. The irrigated horticultural settlements established on these soils along the River Murray have been notably successful, but where dry land arable farming is practised these soils are susceptible to wind erosion.

There are other important features that affect plant growth, such as acidity and alkalinity, supply of trace elements and so on. Information about these and their importance in different localities can be obtained from the South Australian Department of Agriculture and Fisheries and in a bulletin published by the Department entitled *Soils of South Australia's Farm Lands*. The extent of country covered by the different soil groups is illustrated by the *Atlas of Australian Soils* which is being compiled by the Division of Soils, Commonwealth Scientific and Industrial Research Organization (CSIRO). The first sheet of this Atlas, published in 1960, includes the areas of higher rainfall country in South Australia and refers to the many soil surveys made in this State.

A special article on the Soils of South Australia was included on pages 21-31 of the *South Australian Year Book 1969*.

### Building Soils

The soils of Adelaide and environs have varying engineering properties and provide varying foundation conditions for buildings. They may be classified as follows:

- (a) Expansive clay soils which show changes in volume with changes in moisture content; these soils are often commonly known as 'Bay of Biscay' soils;
- (b) Collapsing soils which, when wetted beyond a certain limit, lose strength and are liable to settle suddenly, even under their own weight; they are usually fine limey silts of windblown origin;
- (c) Compressible soils, occurring chiefly on the coastal river estuaries, are associated with high water tables and restricted surface drainage; these soils are unable to carry building loads without long-term settlement;
- (d) Stable Soils, which include alluvial sands and gravel, and most weathered rocks.

Different types of house footing have been designed or adapted to cope with these problem soils, and further details are given in the pamphlet entitled *Soil Tests and House Foundations in Adelaide*, published by the Department of Mines and Energy.

## 1.4 FLORA AND FAUNA

### FLORA

A broad division of vegetation types is formed by Goyder's Line which represents approximately the 250 millimetre annual isohyet. To the north of the Line, in the Eremaean Province, lies about 80 per cent of the State, experiencing arid to desert conditions where short, erratic growing seasons prevail. Areas to the south, in the temperate region, have climates geared to an equable seasonal cycle of winter rainfall and summer drought.

#### Eremaean Areas

These vast areas of inland South Australia are not well known botanically. Vegetation ranges structurally from low layered woodland, through shrub savannah, to exceedingly sparse vegetation of very low stature (shrub steppe). As in arid situations elsewhere throughout the world, therophytes are well represented and after rain these may transform the scene with prolific but transient herbage. The woody perennial vegetation is of genera adapted to the dry conditions. Predominant trees and shrubs are frequently species of *Acacia* (mulga, myall, ironwood) *Cassia*, *Grevillea* etc. but other genera (*Hakea*, *Myoporum*, *Casuarina*, and less frequently *Eucalyptus*) are often found. Some species such as the desert oak achieve a stature comparable with large temperate zone trees. Chenopod shrubs (Blue Bush, Salt Bush) are often prominent in the shrub stratum, and *Triodia* (Porcupine Grass) is the herbaceous cover, but there is considerable diversity in the Eremaean flora. The development of cattle and sheep grazing industries and overstocking for long periods, especially in times of drought, has led to the depletion of, and alteration to, much of the vegetation of this area.

#### Temperate Areas

In general, vegetation characteristics of the temperate zone of South Australia succeed each other in a fairly predictable sequence from the highest to the lowest rainfalls. Under the high and intermediate rainfalls (about 750-1 000 millimetres) dry sclerophyll forest is well developed, particularly in the Mount Lofty Ranges, where it constitutes a western outlier of the dry sclerophyll forest system occurring in eastern Australia. *Eucalyptus obliqua* and *Eucalyptus baxteri* predominate, but other species such as *Eucalyptus rubida* (the candlebark) are sometimes prominent. Such forest is replete with lesser trees *Acacia melanoxylon* (blackwood) at a lower canopy level and a rich array of sclerophyllous shrubs and sub-shrubs beneath. Most species have generic analogues in equivalent dry sclerophyll forests of both eastern and western Australia. Sclerophyll forest in South Australia has been cut over extensively and is being invaded by aliens. Lower rainfall areas down to about 400 millimetres per annum support mainly savannah woodlands and layered woodlands with South Australian bluegum (*Eucalyptus leucoxylon*) and peppermint gum (*Eucalyptus odorata*) as predominant trees. Associated trees include river redgum (*Eucalyptus camaldulensis*) especially along river and creek frontages, sheoak (*casuarina* spp.), and manna gum (*Eucalyptus viminalis*). In these vegetations the grass stratum is expressed and the shrub stratum rather suppressed. These vegetations are now almost entirely replaced by agricultural areas.

In some places on the lower rainfall extreme of the temperate zone, variant vegetations occurred. These included substantial conifer (*callitris* spp.) and conifer-eucalypt forests and woodlands (particularly in the Flinders Ranges), and areas of pure savannah, as once occurred about Burra.

The simple division of the State into Eremaean and temperate areas needs qualifying on two counts:

(i) *Heath*. Certain higher rainfall temperate areas do not support the expected vegetation as a consequence of limiting soil fertility. The Coonalpyn Downs area is an example. Here low nutrient dune fields are superimposed on the landscape and support only a heath vegetation where the rainfall regime is suitable for woodland. Such 'light land' is the scene of contemporary agricultural expansion.

(ii) *Mallee*. Intercalated between the Eremaean and temperate systems proper, there is developed in South Australia extensive mallee vegetation, dominated by eucalyptus, the various stems of which all rise from underground lignotubers. The term 'mallee' refers both to eucalypt species exhibiting this growth habit, and to vegetation dominated by such species. Mallee vegetation is associated in its temperate reaches with heath, and in its Eremaean extensions with various vegetation types.

A more detailed description of the vegetation was included on pages 26-37 of the *South Australian Year Book* 1967 and should be referred to for a description of the plant species included in the vegetation formations shown in the map on page 29 of this issue.

#### FAUNA

South Australia, centrally situated and sharing borders with every other mainland State, is in a sense the zoological cross-roads of the continent. A number of typically western, eastern, and northern species extend to some point within the State, which has few species that are uniquely South Australian.

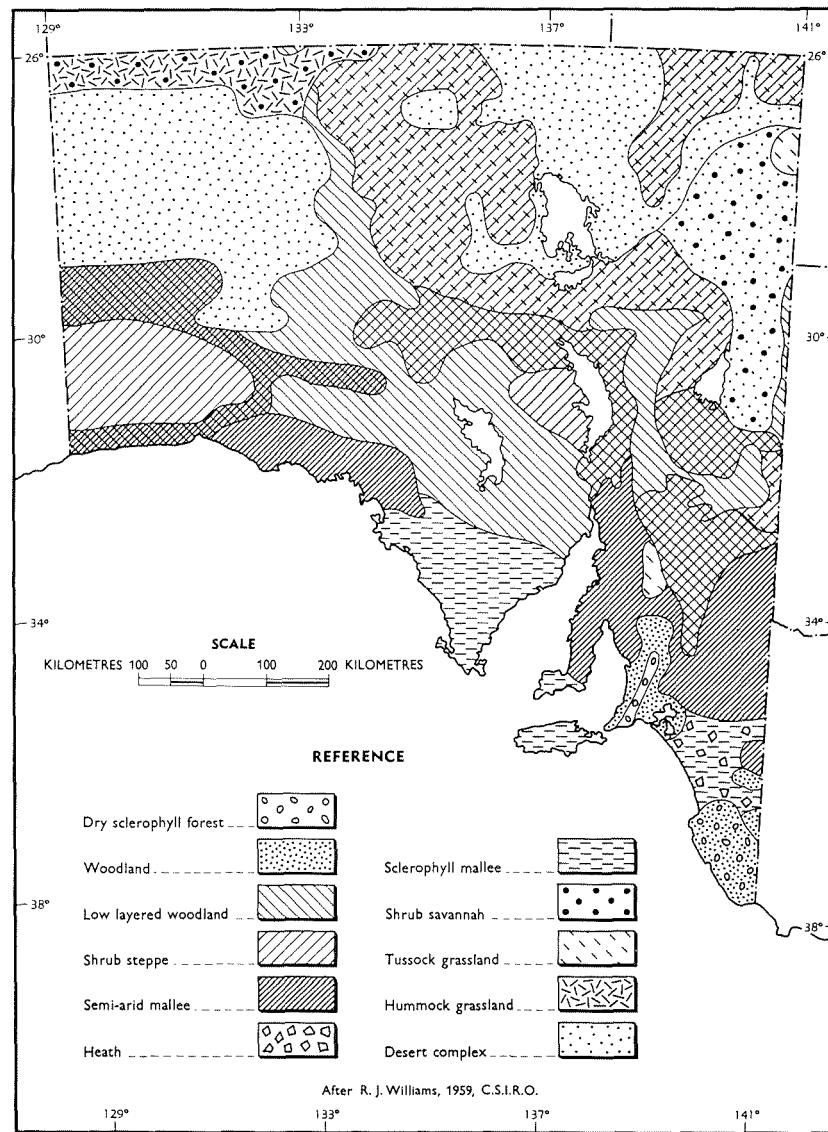
Only 8.3 per cent of South Australia—a fragmented, southern fringe—is favoured with an annual rainfall of 400 or more millimetres; more than 80 per cent receives 250 millimetres or less. The moister areas are restricted mainly to three peninsulas, to Kangaroo Island and the extreme south-east and these are divided by gulfs, straits, and stretches of drier country. Further north, the semi-arid to arid zone is deeply cut into and split by Spencer Gulf and the central highlands. Because of this geographical background the distribution of South Australian fauna, notably of birds and reptiles, is very complex.

Highly developed agriculture in the limited favourable areas and the wide-spread pastoral occupation beyond have depleted the fauna, particularly the mammals. A series of national parks and reserves is being established which will preserve samples of the various habitat types and, it is hoped, their indigenous fauna. The National Parks and Wildlife Service controls over 40 000 square kilometres on the mainland (see Part 6.4), and Flinders Chase Reserve (549 square kilometres) on Kangaroo Island which is free from the introduced fox.

The land mammals of South Australia at the time of European settlement numbered about 90 species—some 38 per cent of the total Australian mammal fauna. The two monotremes have survived; the spiny ant-eater is wide-spread but nowhere common, while the platypus (once found in the River Onkaparinga as well as in the River Murray) is extremely rare except where it has been introduced in Flinders Chase. The marsupials have been affected most severely; more than a quarter of the 50 or so species are now extinct in South Australia although a number of these survive beyond the State. Originally the marsupial fauna was relatively rich with some 45 per cent of the total number of Australian species represented.

Marsupials that are still common are the brushtailed possum (*Trichosurus vulpecula*) and the western grey kangaroo (*Macropus fuliginosus*). In the dry interior the red

**SOUTH AUSTRALIA  
VEGETATION MAP**



kangaroo (*Megaleia rufa*) at times greatly increases in number, probably because of changes caused by livestock grazing and the provision of extra water. Today South Australia is almost the sole custodian of the hairy-nosed wombat (*Lasiorhinus latifrons*) which is still numerous in the far west of the State, but elsewhere the species has been reduced to a few small isolated colonies.

Of the native placental mammals possibly one of the 15 or so species of bats and three or four of the 18 rodents have become extinct.

A special article on the mammals of South Australia was included on pages 42-9 of the *South Australian Year Book* 1970.

About 400 of the 700 species of Australian birds have been recorded in the State, a number that includes 40 or more vagrants and non-breeding visitors. Many species have declined greatly since settlement but probably not more than two have become extinct. The diminutive Kangaroo Island emu disappeared soon after the European settlement and the night or spinifex parrot (*Geopsittacus occidentalis*) is almost extinct in South Australia.

Many species of birds can be observed close to Adelaide in the Mount Lofty Ranges and on Kangaroo Island. Mallee areas with their lower rainfall are moderately rich in bird life although the removal of native flora has caused the disappearance of many in certain districts. Within the State may be found the boundaries between numerous western and eastern species and sub-species of birds.

A special article on the birds of South Australia was included on pages 28-40 of the *South Australian Year Book* 1972.

Well over 100 species of reptiles have been recorded. Of the few that are peculiar to the State, the white dragon lizard (*Amphibolurus maculosus*) found on the salt-encrusted margins of Lake Eyre and other inland playas is of particular interest. Undescribed species of lizards are known to occur in the Flinders Ranges. A special article on the reptiles of South Australia was included on pages 32-42 of the *South Australian Year Book* 1973.

The nineteen species of frogs include one that is restricted to the State. This number is only 16 per cent of the Australian frog fauna (123 species) and reflects, in large degree, the predominantly arid nature of the State.

Marine and freshwater fishes number about 390 species—not a very rich fauna for a State with a coastline of nearly 4 000 kilometres. There is, however, an abundance of certain species of economic importance. A special article on the freshwater fish of South Australia was included on pages 27-34 of the *South Australian Year Book* 1971.

The insects of the coastal regions show affinities with those of similar regions to the east and west, while many of the restricted number of species of the inland extend widely through arid Australia.

Among insect groups that are prominent elsewhere in Australia but are scarce in this State are butterflies and cicadas, while insects that depend on permanent streams or swamps, such as dragonflies and caddisflies, are rather poorly represented. Similarly, few species of freshwater crustaceans occur. In eastern and western Australia hosts of wasps, native bees, jewel beetles and other insects are attracted to the flowers of native shrubs in spring and summer. These insects are less numerous in South Australia largely because of the nature and limited extent of the bushland.

Among the restricted range of insects of the arid interior are a number of interesting forms. Of these certain desert-adapted grasshoppers (*Acrididae*) are notable. Other groups with specialised species are lacewings (*Neuroptera*) and beetles and moths. Some are never abundant but the populations of others may fluctuate enormously. Moths can prolong the pupal stage to survive dry periods and may emerge in great numbers after heavy rain.

A special article on the insects of South Australian homes and gardens was included on pages 32-42 of the *South Australian Year Book 1976*.

## VERTEBRATE FOSSILS OF SOUTH AUSTRALIA\*

### Introduction

The animal world is divided by scientists into a number of major groups called phyla of which about half have shells or skeletons or some other type of mineralised hard parts which can become fossilised. Such phyla include the Coelenterata (corals, jelly fish), Arthropoda (insects, crustacea, trilobites), Mollusca (cockles, snails, cuttlefish), Echinodermata (sea urchins, starfish), and Chordata. The chordates are typified by having a stiffening rod, or notochord, at some stage of life, and include the vertebrates, where the notochord exists only in the embryo and is replaced by a bony vertebral column or spine. The subphylum Vertebrata contains fish, amphibians, reptiles, birds and mammals, including Man.

Fossil evidence shows that most of the phyla that could become fossilised appeared just before or early in the Cambrian Period of geological time. The Cambrian started 570 million years ago and lasted about 70 million years. Until recently, it was believed that the subphylum to which humans belong, the Vertebrata, did not appear until 450 million years ago, in the Ordovician Period. However, research in North America has revealed microscopic fossils that push back our origins into the Cambrian. These fossils are the minute bony scales of a very primitive type of jawless fish, that persisted with little change for many millions of years. Although areas of sedimentary rock of this age in South Australia have been closely studied for microfossils, none of these bony scales have been found. South Australia has no vertebrate fossils for another three hundred million years of geological time; however, it is possible that older fossil vertebrates may be found in distant parts of the State.

### Beginnings

The phylum Chordata contains two super-classes: Pisces and Tetrapoda, each of which contain several classes. In the Pisces (fish) are the Agnatha (jawless fishes), Placodermi (armoured fish), Chondrichthyes (cartilaginous fish including sharks) and Osteichthyes (bony fish). The Agnatha first appear, although rarely, in Cambrian rocks, and did not really flourish until the Devonian Period, 345 to 405 million years ago, after which they virtually disappeared. There are a few modern species, the hagfishes and lampreys that are found in South Australian waters today, for which there are almost no fossil representatives. One of the oldest and best-preserved fossils of a jawless fish in Australia, *Arandaspis prionotolepis*, found in the Northern Territory just north of the South Australian border, comes from the Middle Ordovician (about 450 million years ago).

The Devonian Period is sometimes termed the Age of Fishes. The classes mentioned above flourished and two, the Agnatha and Placodermi, disappeared at the end of that Period, while others, especially the Osteichthyes, began a major expansion. In Australia, fish fossils of Devonian age are found in central Australia, Western Australia, New South Wales and Victoria. Although rocks considered to be of this age are found in the northwest of South Australia, no fossils have been discovered.

The Devonian was an important period for another reason, in that it saw the first appearance of the Tetrapoda. The tetrapods comprise the Classes Amphibia, Reptilia, Aves (birds) and Mammalia. One of the groups of fish that make up the Osteichthyes, the

\* Contributed by N. S. Pledge, South Australian Museum

Sarcopterygii ('fleshy-fin'), include a 'living fossil', the coelacanth *Latimeria* of the Indian Ocean near South Africa and Malagasy, and the various lungfishes (Dipnoi) of Australia, Africa and South America. It was from a fish related to these that the first amphibians evolved. Some of the oldest evidence of these tetrapods has been found in Australia: trackways in Gippsland, Victoria and a jaw near Forbes, New South Wales.

### Mesozoic Era

The oldest vertebrate fossil found in South Australia is a fish, *Leighiscus hilli*, which was collected from the Upper Triassic (200 million years old) coal measures at Leigh Creek. Unfortunately, only the tail was found, but this was enough to indicate a whole new family of fishes. It is not until we look at upper Mesozoic rocks, deposited at the time of the Great Inland Sea in the Early to Middle Cretaceous Period, that vertebrate fossils become at all 'common' in South Australia.

Most of the fossil bones of this period have come from the opal fields, particularly Andamooka, where they seem to be relatively common. (It is unfortunate that so few are brought to scientific attention at the South Australian Museum, as many are broken up into worthless fragments in the hope that they contain some good opal.) The opal beds are of Aptian (Lower Cretaceous) age, between 106 and 112 million years old, and contain a variety of fossils, including wood, cockles, snails and sea lilies (crinoids) as well as the bones of marine reptiles. Most of the bones are those of plesiosaurs which were rather like seals with elongated necks and tails. A few partial skeletons have been found, but generally these have been too badly damaged during discovery to be of scientific value, and South Australia has none in its museum collections. However, there are a number of bones or replicas from Andamooka in the South Australian Museum, but since they are only isolated or incomplete finds, their identities are uncertain.

**Geological Time Scale of Important Australian Events in Vertebrate Evolution**

Age in Millions of Years	Period	Important Australian Events
0.01	HOLOCENE	Oldest known dingo, South Australia (3 000 yrs); last mainland thylacines and devils (3 000 yrs).
2	PLEISTOCENE	Last of the giant marsupials (11 000 yrs); estimated arrival of Man in Australia (50 000 yrs); last Australian flamingoes
5	PLIOCENE	Oldest Australian rats, Queensland, 4.5 m.y.
22.5	MIOCENE	Oldest Australian flamingoes, bats, monotremes, marsupials (mainland) South Australia, 15 m.y.
36	OLIGOCENE	Oldest Australian marsupials, Tasmania, 22.5 m.y. Shark-toothed whales, South Australia, Victoria and Tasmania.
53	EOCENE	First penguins, South Australia, 40 m.y. Separation of Australia from Antarctica
65	PALEOCENE	No vertebrate fossils except fish.

**Geological Time Scale of Important Australian Events in Vertebrate Evolution (continued)**

Age in Millions of Years	Period	Important Australian Events
	CRETACEOUS	Great Australian Sea; plesiosaurs, ichthyosaurs, dinosaurs in South Australia, 110 m.y.
136	JURASSIC	Age of Dinosaurs. Beginning of break-up of Gondwanaland
193	TRIASSIC	Oldest South Australian vertebrate; fish <i>Leighicus</i> , 200 m.y.; oldest Australian reptiles, Tasmania and Queensland
235	PERMIAN	The Great Australian Ice Age
280	CARBON-IFEROUS	Fish
345	DEVONIAN	First amphibians, <i>Metaxygnathus</i> , New South Wales, 350 m.y.; Victoria (tracks). Age of Fishes.
395	SILURIAN	No vertebrate fossils
440	ORDOVICIAN	The oldest Australian fish <i>Arandaspis</i> (Northern Territory)
500	CAMBRIAN	No vertebrate fossils
570	PRE-CAMBRIAN	First animal fossils, South Australia, 600-700 m.y.

Much less common are remains of the dolphin-like ichthyosaurs ('fish-lizards'): only a few vertebral discs have been found at the opal fields, but a segment of the snout and several other bones of a large specimen referable to *Platypterygius australis*, a species well known from Albian rocks in Queensland, was found near Marree in 1970.

Andamooka has yielded, besides plesiosaurs and ichthyosaurs and opalised wood, bones of dinosaurs. The shin bone (tibia) of a lightly-built, bipedal, carnivorous dinosaur (coelurosaur) *Kakaru kujani* was found in 1973, followed soon after by a toe bone that may represent a different species. Unfortunately, the Museum has only casts of these important specimens, which have apparently been sold and illegally exported.

In the Albian rocks (100 to 106 million years old) further north in the State, several isolated and unidentifiable plesiosaur bones have been found. A few shark teeth, referable to *Odontaspis*, the sand or nurse shark, have also been found.

**Tertiary Period**

The Cainozoic Era is the Age of Mammals, following the sudden and complete demise of the dinosaurs and many other animals. Mammals had appeared at about the same time as the dinosaurs, during the Triassic Period one hundred million years earlier. At the time the world's geography was totally different from today's. As a result of continuing continental drift, caused by plate tectonics, the continental masses had all come together to form a super continent that geologists call Pangaea. There were reduced barriers to

migration, so that early reptiles and paramammals (mammal-like reptiles) were able to spread widely. Similar species existed in places as widely separated as Antarctica, South Africa and China. Their fossil remains are now found in sediments that were deposited when these areas formed a single land-mass. (No paramammals have been found in Australia.) As time progressed, plate tectonics continued and Pangaea split up into two major continents: Laurasia in the northern hemisphere, and Gondwanaland in the southern hemisphere, although they maintained tenuous connections in the region of central America and Gibraltar.

The ancestors of modern mammals began to appear during the Middle Cretaceous. The oldest known marsupials, known only from isolated teeth and fragments of jaws, are to be found in Late Cretaceous rocks of North America. A little later, marsupials appeared in South America, where they differentiated over the next 70 million years into numerous species, many of which became extinct, apparently due to the later arrival and competition of placental mammals. It is not clear when marsupials reached Australia. South America maintained links with us, via Antarctica, until about 50 million years ago, when the Southern Ocean began to form and Australia started to move northwards. Marsupials reached Europe from North America during the Early Tertiary, but could not move into Asia, which was separated by a seaway on the site of the Ural Mountains of Russia, nor into Africa and India, because these parts of Gondwanaland had separated before the marsupials evolved. No fossil marsupials have been found in Antarctica, but this is due to the lack of rock outcrops of the right age, and the almost total ice cover. It may only be coincidence that Australia's oldest marsupials were found in Tasmania, the original gateway to the rest of Gondwanaland. These fossils are of Late Oligocene age (23 million years).

While the marsupials were finding their way to Australia, other things were happening. Birds, which had evolved from small carnivorous dinosaurs in the northern continents during the Jurassic, were very rare but had spread widely, as witnessed by some fossil feather impressions of Early Cretaceous age, found in Victoria. Here, on the subpolar coasts of Gondwanaland, some of them evolved into penguins. Some of the oldest of these have been found in the Upper Eocene Blanche Point Marl at Port Noarlunga and Blanche Point, just south of Adelaide. Here they lived in competition with several species of sharks, which have left their teeth as fossil records: *Lamna apiculata*, *Odontaspis macrota*, *Scapanorhynchus maslinensis*, *Hexanchus agassizi* and *Heptranchias howelli*. Also present were eagle rays, (*Myliobatis*), gummy sharks (*Mustelus*), sawfish (*Pristis cincta*) and unidentified bony fish (teleosts).

The placental mammals were also moving. One carnivorous group in Laurasia returned to the sea, and by Middle Eocene times had evolved into whales. Some of Australia's oldest fossils of whales are the teeth of squalodonts ('shark-toothed whales'), such as *Metasqualodon harwoodi* and '*Squalodon*' *gambierensis*, found in Oligocene rocks of the Murray Basin-Gambier Embayment. At Mount Gambier were found South Australia's last fossil penguins, one of which seems to have been killed by a toothed whale or possibly the giant shark *Carcharodon angustidens*. (Younger fossil penguins have been found in Victoria and elsewhere.) Modern-type whales were soon roaming the large bays and gulfs of Australia. Their vertebrae and ribs are not uncommon in the Early Miocene (14-23 million years) limestone cliffs of the lower Murray. Occasional teeth of odontocetes, possibly sperm whales, have been found, while a partial skull of the cetothere *Aglaocetus*, a whale-bone whale, was collected near Murbko, in about 1885. These whales had as competitors and predators a number of sharks, such as *Odontaspis cuspidata*, *Hemipristis serra*, and the giants *Isurus hastalis* and *Carcharodon megalodon*. Also present were the eagle ray *Myliobatis*, tiger sharks *Galeocerdo*, Port Jackson shark *Heterodontus*, porcupine fish *Diodon*, and snapper cf. *Chrysophrys*.

# SOUTH AUSTRALIA DISTRIBUTION OF SOME VERTEBRATE FOSSILS

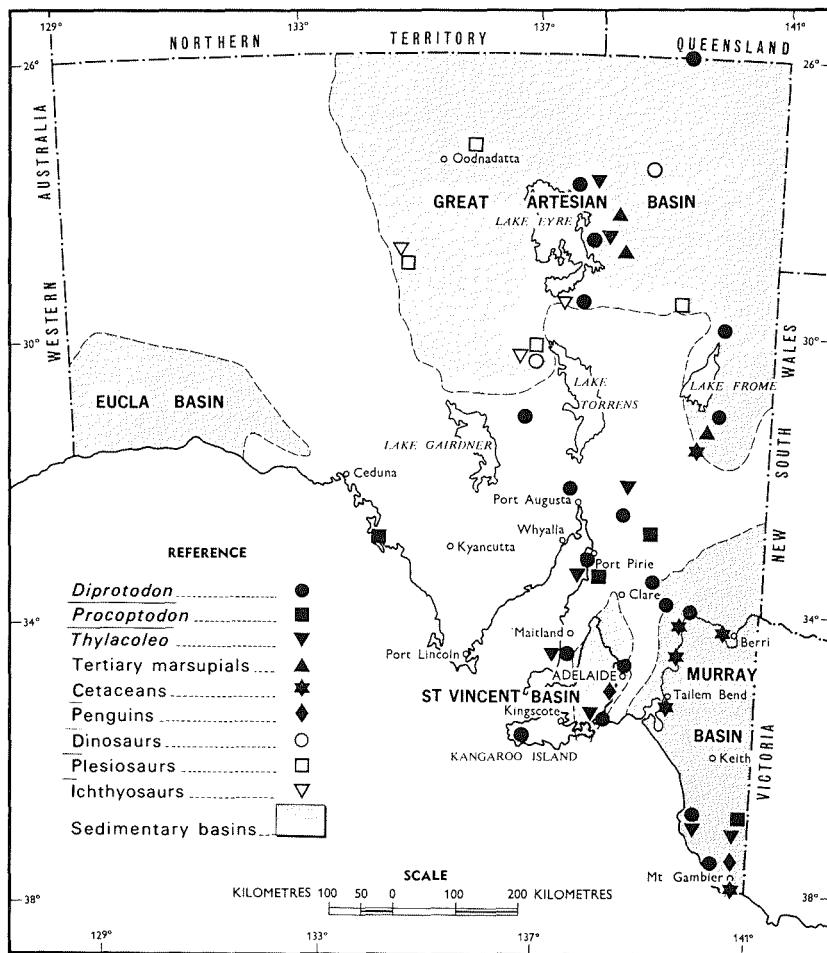


Table I—Comparative Faunal List for South Australian Tertiary Vertebrate Fossil Deposits

LOCAL FAUNA		NGAPAKALDI (Eladuna Formation, c. 15 m.y.)	PINPA (Namba Formation—Lower, c. 15 m.y.)	ERICMAS (Namba Formation—Upper, c. 14 m.y.)	KUTIAR FORMATION— (Tirar Formation, c. 12 m.y.)	PALANKARRINA (Mampawordu Sands, c. 4 m.y.)	KANJUNKA (Kapinpi Sands, c. 2.3 m.y.)
VERTEBRATE CATEGORY							
OSTEICHTHYES							
Dipnot (lungfish)							
Teleostei (modern fish)							
AMPHIBIA							
Anura (frogs)							
REPTILIA							
Cheiaria							
Cheiidae (sideneck tortoise)†							
Melomaniidae (horned tortoise)†							
Crococilia							
Crocodiliidae (crocodiles)							
Squamata (lizards)							
AVES							
Dromaiidae (emus)							
Dromornithidae†							
Pelecanidae (pelicans)							
Phoenicopteridae (flamingoes)							
COLUMBIFORMES							
Anatidae (ducks)							
Gruidae (cranes)							
Burhinidae (thick-knees)							
Laridae (gulls)							
Columbidae (pigeons)							
MAMMALIA							
MONOTREMATA							
Otiorrhynchidae (platypus)							
MARSUPIALIA							
Dasyuridae (marsupial 'mice')							
Thylacinidae ('Tasmanian Wolf')†							
Pteropeltidae (bandicoots)							
Thylacomyidae (rabbit-eared bandicoots)							
Phascogalidae (koalas)							

Vombatidae (wombats)	x	x	<i>Nanamia nideri</i>	<i>Rhizophascolonus crowcrofti</i>	<i>Phascolonus</i>
Palorchestidae†	<i>Ngapakalidia fedjordi</i>	<i>Ngapakalidia bonvouloiri</i>	<i>Ngapakalidia?</i>	<i>Ngapakalidia fedjordi</i>	
Diprotodontidae‡	<i>Pitikana dalyi</i>	*	<i>Raematherium yakkalai</i>	<i>Neothelos tirarensis</i>	<i>Zygomaticurus keeni</i>
					<i>Meniscocephalus mansoni</i>
Burramyidae ('pigmy possums')	x	x			<i>Euionyces?</i>
Phalangeridae (brushtails)	x	x			*
Ektopodomidae†	x	x			*
Thylacoleontidae (marsupial lion)†	*	*	<i>Ektopododon serratus</i>	*	*
Wynyardiidae?†	x	x	<i>Ektopododon</i>	*	
Macropodidae (kangaroos)	*	*	<i>Wakaleo oldfieldi</i>	*	*
			x	*	
Potoroidae (rat-kangaroos)	x	*	<i>cf. Setonix</i>	x	
Petauridae	x	x		x	
Pseudochirinae (ringtails)	x	x		x	
				x	
EUTHERIA (Placental)					
Chiroptera (bats)		1 tooth, rhinolophid			
Cetacea (whales)		*	x		*
Plantanistidae (river porpoise)			*		*
Rodentia	*	*	*	*	*
Muridae (rats and mice)	*				

Symbols used: x represented but undescribed  
                   \* not present  
                   ? presence or identity uncertain  
                   † extinct

In South Australia the Early to Middle Miocene was the period of maximum expansion of the sea. Coincidentally, it is also the time when marsupial fossils first appear in this State, near Lakes Eyre and Frome, in areas of non-marine deposition in ancient lakes, swamps and river systems. Fossiliferous deposits of three distinct ages are known, each having a characteristic fossil fauna.

#### *Etadunna and Namba Formations*

These are roughly equivalent in age, at Early to Middle Miocene (14-15 million years). The Etadunna Formation was deposited in the Lake Eyre Basin, the Namba in the Lake Frome area which was probably connected to the sea in the Murray Basin south of the Olary Hills. The Etadunna Formation contains a wide variety of fossils termed the Ngapakaldi local fauna. The Namba Formation is considered to have two faunas: the Pinpa (equivalent in age to the Ngapakaldi) and the slightly younger Ericmas local fauna. Many species are yet to be described scientifically, and have no names, but they are indicated in Table I on pages 36-7.

#### *Wipajiri Formation*

The next youngest fauna, the Kutjamarpu, occurs in one small locality as a channel-fill deposit. This is regarded as being of Middle Miocene age, possibly 12 million years old.

#### *Mampuwordu Sands*

The mammals of the Early Pliocene Palankarinna fauna, also preserved in a channel deposit, are more similar to Pleistocene and modern faunas. Notably, the large quadrupedal diprotodontids and the kangaroos were beginning to increase in variety and abundance. This trend, in the kangaroos at least, is also seen in the somewhat younger Kanunka fauna, from the Plio-Pleistocene Katipiri Sands.

It must not be assumed that our knowledge of the evolution of Australian mammals is derived solely from South Australian fossils. Some eight or nine other faunas from Tasmania, Victoria, Queensland, the Northern Territory, and New Guinea are interspersed in time with them.

Comparative study of these suggests that the modern Australian fauna includes the remnants (as koalas and wombats) of a much earlier spread of marsupials for which we have little evidence except in its last stage, in Oligocene-Miocene times. It raises the question: were the first marsupials that reached Australia at least 50 million years ago rather unspecialised forms like the American didelphid opossums? Some of the oldest dasyurids, such as *Ankotarinja* of the Ngapakaldi fauna, show considerable resemblance to the didelphids. Alternatively, had the marsupials already begun to diversify from this primitive form into different types to fill the vacant ecological niches they encountered even before they reached Australia? The evidence for this could be hidden in Antarctica, for there is a gap in our knowledge, of at least 30 million years, before Australian fossil marsupials are known.

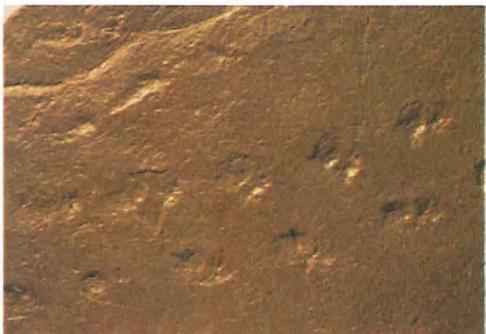
The Ngapakaldi and Ericmas faunas also bear the oldest evidence of the monotremes, those 'aberrant', egg-laying mammals. Two teeth and several bone fragments serve to indicate the presence of an animal *Obdurodon*, possibly ancestral to the platypus, and certainly a little less specialised. But we still do not know how long the monotremes have been a distinct group, nor from which fossil group they evolved, nor when they first appeared in Australia. Their history seems to be quite distinct from that of the marsupials, and may go back 200 million years.

#### *Pleistocene Epoch*

By the dawn of the Pleistocene, about 2 million years ago, the modern marsupial fauna, or at least their immediate ancestors, were well established. Only the kangaroos



*Arandaspis prionotolepis*—heterostracan fish; Ordovician of Central Australia.



Amphibian trackway; Devonian, east Gippsland, Victoria.



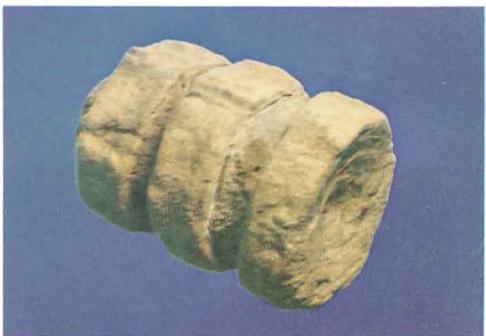
*Leighiscus hillsii*—tail of a fish; Late Triassic, Leigh Creek. The earliest vertebrate fossil found in South Australia.



*Woolungasaurus*—the paddle of a plesiosaur from the Early Cretaceous of Andamooka.



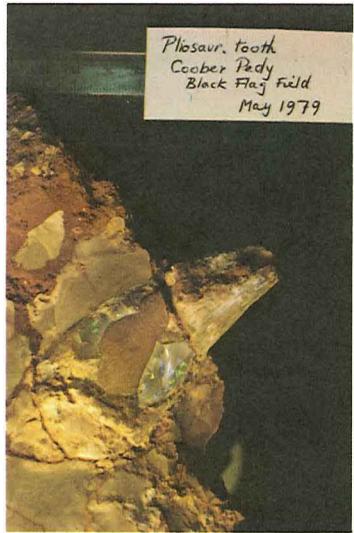
*Kakaru kujani*, a lower end of the shinbone of a small carnivorous dinosaur; Early Cretaceous, Andamooka.



Ichthyosaur vertebrae; Early Cretaceous, Coober Pedy.



*Platypterygius australis*—segment of ichthyosaur snout; Early Cretaceous near Marree.

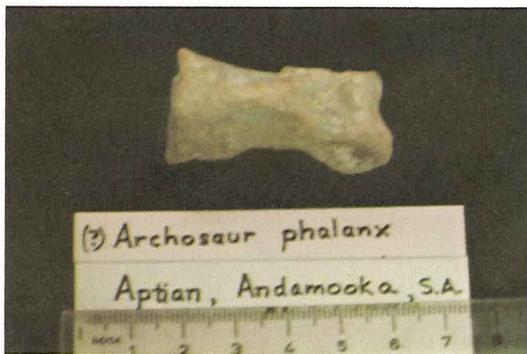
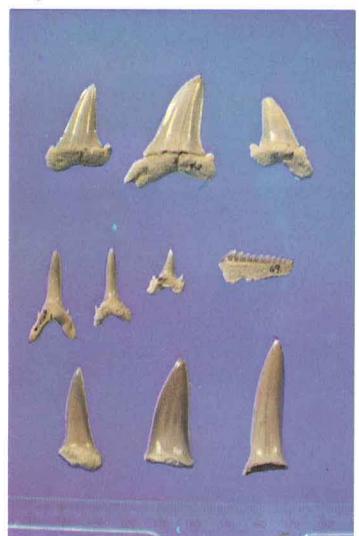


Opalised pliosaur tooth; Early Cretaceous, Coober Pedy.



Opalised plesiosaur limb-bone; Early Cretaceous, Andamooka.

Shark teeth; Late Eocene, Blanch Point Marl. Top: *Lamna apiculata*. Middle row: *Odontaspis acutissima*, *Hexanchus agassizi*. Bottom: *Odontaspis macrota*.



Opalised toe bone of a small carnivorous dinosaur; Early Cretaceous, Andamooka.



*Scapanorhynchus maslinensis*—teeth of a goblin shark; Middle to Late Eocene, bore at Naracoorte.



Penguin humerus (wing bone); Late Eocene, Christies Beach.



*Metasqualodon harwoodi*—shark-toothed whale; Late Oligocene, Wellington.



*Squalodon gambierense*—shark-toothed whale; Early Miocene, Mount Gambier.



*Carcharodon angustidens*—tooth of giant white shark, and penguin humerus with tooth marks; Early Miocene, Mount Gambier.



Unidentified fish, skull; Early Miocene, near Loxton.



Snapper-like fish; Early Miocene, near Overland Corner.



Shark teeth; Early Miocene, Morgan. Top: *Isurus hastalis*. Middle left (upper): *Hemipristis serra*; (lower): *Carcharhinus aculeatus*. Middle right (upper): *Odontaspis cuspidata*; (lower): *Myliobatis* sp. (eagle ray). Bottom: *Carcharodon megalodon*.



*Ngapakaldia tedfordi*—early diprotodontid marsupial; Early Miocene, Lake Eyre region.



*Raemeotherium yatkolai*—jaw of primitive diprotodontid marsupial; Early Miocene, Lake Frome region.





Lower jaw of an undescribed wombbatoid marsupial; Early Miocene, Lake Eyre region.



*Namilamadeta snideri*—partial palate, primitive wombbatoid marsupial; Early Miocene, Lake Frome area.



Undescribed Phascolarctid (koala), lower and upper jaws; Early Miocene, Lake Frome area.



*Ektopodon* sp.—ektopodontid marsupial, jaw; Middle Miocene, Lake Eyre region.



*Wakaleo oldfieldi*—primitive ‘marsupial lion’; Middle to Late Miocene, Lake Eyre region.



*Ischnodon australis*—bandicoot jaw; Early Pliocene, Lake Eyre region.



*Prionotemnus palankarinnicus*—kangaroo jaw;  
Early Pliocene, Lake Eyre region.



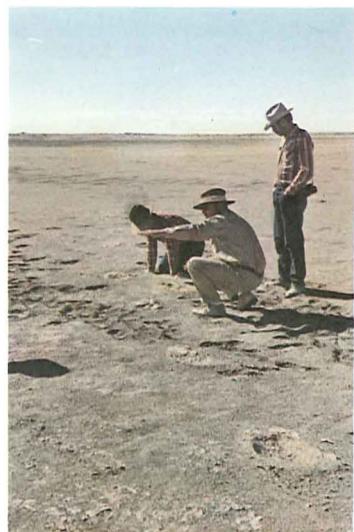
*Genyornis newtoni*—leg, mihirung  
bird (Dromornithidae); Pleistocene,  
Lake Callabonna.



*Diprotodon optatum*—a hippo-sized diprotodontid marsupial; Pleistocene, Lake Callabonna.



*Phascolonus gigas*—giant wombat; Pleistocene,  
Lake Callabonna.

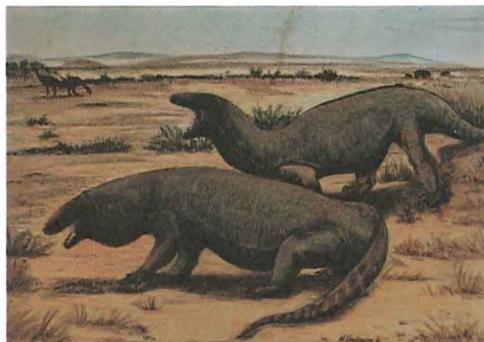




*Palorchestes azael*—a tapir-like diprotodontid;  
Late Pleistocene, Naracoorte.



*Zygomaturus trilobus*—a cow-sized diprotodontid;  
Pleistocene, Kingston (SE).



*Megalania prisca*—giant goanna, reconstruction  
by H. Galliano; Pleistocene.



*Crocodylus* sp.—crocodile jaw fragment and  
teeth; Pleistocene, Cooper Creek.



*Sthenurus atlas*—short-faced kangaroo; Pleis-  
tocene, Naracoorte.



*Simosthenurus maddocki*—giant short-faced  
kangaroo; Pleistocene, Tantanoola.



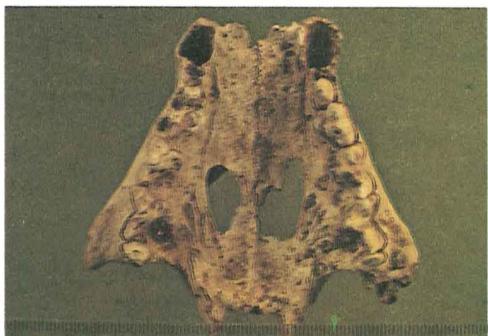
*Protomnodon roeonus*—giant wallaby, upper jaw; Pleistocene, Curramulka.



*Sthenurus* sp.—short-faced kangaroo being excavated; Pleistocene, Lake Callabonna.



*Progura naracoortensis*—giant mallee fowl, humerus (wing bone); Pleistocene, Naracoorte.



*Sarcophilus harrisii*—‘Tasmanian’ devil, palate; Pleistocene, Kangaroo Island.



*Phascolarctos cinereus*—koala, upper and lower jaws; Pleistocene, Kangaroo Island.



*Thylacoleo carnifex*—‘marsupial lion’ reconstructed skeleton; Pleistocene, Naracoorte.

All photographs by N. S. Pledge.

seem to have evolved much since then. However, the Pleistocene fauna was still considerably different, as it included many large species that have been extinct for at least the last 10 000 years.

Pleistocene fossil occurrences are widespread across Australia, and many species were wide ranging. An example of this is the cow-sized herbivorous diprotodontid *Zygomaturus*, which has been found in every State except, so far, the Northern Territory. (By contrast, the well-known *Diprotodon* did not reach Tasmania or the southwest of Western Australia.) Generally, the richest occurrences are in caves, but several important sites are known that originated as river and swamp deposits. The Darling Downs of Queensland is such a locality. In South Australia, early Pleistocene fossils have been found on gravel banks in Cooper Creek and The Warburton, having been washed out of unknown channel deposits by recurrent floods. These assemblages include fossils of crocodiles, large tortoises and water birds (pelicans, cormorants) as well as *Diprotodon* and kangaroo bones, and the giant goanna *Megalania prisca* which probably reached a length of 7 metres.

Further south at Lake Callabonna is an important fossil deposit where weakened animals were mired and died during a series of prehistoric droughts. The animals include the hippo-like *Diprotodon optatum*; *Phascolonus gigas* (a giant wombat); *Genyornis newtoni* (a giant bird); *Dromaius* (emu); *Macropus* (kangaroo), *Sthenurus* (short-faced kangaroo) and *Protemnodon* (giant wallaby). Surprisingly there has been no sign of carnivores or scavengers, but this may be because they were too light to be trapped in the sticky mud. The Callabonna Fossil Reserve is in a very treacherous and hazardous area, and has little to show the visitor. Tourists are prohibited because of the sensitivity of the region to environmental breakdown, and because the few clues to the fossils can be so easily destroyed.

Other open sites are numerous but generally have yielded only a few bones, mostly of *Diprotodon* or the giant short-faced kangaroo *Procoptodon*. Cave sites occur in the Flinders Ranges, on Yorke Peninsula and Kangaroo Island, and in the south-east of the State, the richest by far being at Naracoorte, where a special museum/interpretation centre has recently been opened. The cave faunas are of Late Pleistocene age and include many species indistinguishable from those still living. A partial composite list for these sites is given in Table II. Note that the dingo is not included. The oldest known specimen of this placental mammal is only about 3 000 years old. Because of their mobility, the placental bats have a long but almost unknown history in Australia; they are common as fossils from the Late Pleistocene only. Rodents, so abundant in some fossil deposits, are relatively recent arrivals. They apparently came in several migrations when Australia, moving north after its separation from Antarctica, had approached the Indonesian archipelago close enough for individuals to float across the dividing sea on storm debris. The oldest known rodent tooth in Australia (north Queensland) is only 4.5 million years old, but rodent fossils are rare until the Pleistocene.

Towards the end of the Pleistocene, the giant marsupials started to disappear. The reason is unknown, but seems to be a combination of two main factors: deteriorating climate and changed hunting practices of the Aboriginals. Although the Ice Age was (at times) a period of extreme cold, Australia also became extremely arid (at least in the southeastern part of the continent) between 17 000 and 11 000 years ago. Aboriginal man has been in Australia for at least 40 000 years, yet the extinction of the larger marsupials (*Diprotodon* and its relatives and the giant kangaroos) did not occur until the end of the Pleistocene, when there may have been a change in hunting practices, such as the wide use of fire to drive the prey. Individually these changes probably would not have affected the overall fauna, but together, they changed the environment to the detriment of the giant species, as smaller ones were presumably able to find refuge in relict areas.

Table II—Composite List of Late Pleistocene Vertebrate Fossils from South Australian Caves

AMPHIBIA	Several species of modern frogs
REPTILIA	<i>Chelodina</i> cf. <i>longicollis</i> —long-necked tortoise <i>Trachydosaurus rugosus</i> —stumpy-tail lizard <i>Tiliqua</i> , <i>Egernia</i> —other scincid lizards <i>Varanus</i> sp.—goanna <i>Amphibolurus</i> —dragon lizard * <i>Pseudechis</i> , <i>Pseudonaja</i> , <i>Notechis</i> —snakes * <i>Wonambi naracoortensis</i> —giant python
AVES	* <i>Progura naracoortensis</i> —giant mallee fowl <i>Dromaius novaehollandiae</i> —emu * ? <i>Genyornis</i> sp.—dromornithid
MAMMALIA	
MONOTREMATA	* <i>Tachyglossus aculeatus</i> —echidna * <i>Zaglossus</i> cf. <i>robustus</i> —giant echidna
MARSUPIALIA	<i>Dasyurus</i> spp.—native and tiger cats <i>Antechinus</i> spp. <i>Sminthopsis</i> spp. * <i>Sarcophilus</i> cf. <i>harrisii</i> —‘Tasmanian’ devil * <i>Thylacinus cynocephalus</i> —‘Tasmanian’ wolf <i>Perameles</i> spp.—long-nosed bandicoot <i>Isoodon</i> spp.—short-nosed bandicoot <i>Phascolarctos cinereus</i> —koala * <i>Phascolarctos</i> cf. <i>stirtoni</i> —giant koala <i>Vombatus ursinus</i> —common wombat <i>Lasiorhinus</i> sp.—hairy-nosed wombat * <i>Palorchestes azael</i> —a long-snouted, pony-sized quadruped * <i>Zygomaturus trilobus</i> —a cow-sized quadruped * <i>Diprotodon optatum</i> —a hippo-sized quadruped <i>Cercartetus nanus</i> —pigmy possum <i>Pseudochirus peregrinus</i> —ringtail possum <i>Petaurus breviceps</i> —sugar glider * <i>Thylacoleo carnifex</i> —marsupial lion <i>Potorous</i> spp.—potoroos <i>Bettongia</i> spp.—bettongs * <i>Propelopus</i> sp.—giant musk rat-kangaroo <i>Macropus</i> cf. <i>giganteus/titan</i> —grey kangaroo <i>M. cf. rufogriseus</i> —red-necked wallaby ? <i>Wallabia bicolor</i> —swamp wallaby <i>Thylogale</i> sp.—pademelon <i>Lagorchestes</i> sp.—hare wallaby * <i>Protemnodon roechus</i> —giant wallaby * <i>Procoptodon goliath</i> —giant short-faced kangaroo * <i>Sthenurus atlas</i> —giant short-faced kangaroo * <i>Simosthenurus occidentalis</i> —giant short-faced kangaroo * <i>Simosthenurus gilli</i> —giant short-faced kangaroo * <i>Simosthenurus brownii</i> —giant short-faced kangaroo
EUTHERIA	Bats <i>Mastacomys fuscus</i> —broad-toothed rat Other rodents

\*species extinct, at least on mainland Australia

### Holocene Epoch

The end of the Ice Age came relatively suddenly, with the melting of the continental ice caps and consequent rapid rise of the sea level, about 10 000 years ago. As a result, many islands cut off from the mainland of Australia were formed. In South Australia, Kangaroo Island formed, and provided a haven for many animals, such as the now-extinct diminutive Kangaroo Island emu, *Dromaius* sp.

A slightly warmer phase about 5 000 years ago produced sea levels several metres higher than those today, and the resulting beach deposits contain remains of whales stranded then. Several fragmentary specimens have been found at West Lakes and Torrens Island. A partial skeleton of the Australian sea lion *Neophoca cinerea* found on Yorke Peninsula may date from this time.

Although Man has been in Australia for more than 40 000 years, most fossil remains found in South Australia are younger than 10 000 years, and one of the better preserved is the relatively young 'Tartanga Man', dating from 6 000 years ago. While the Aborigines have been in Australia for many millenia, their companion, the dingo *Canis familiaris dingo* is a newcomer. The oldest well-dated specimen, a skeleton from Fromm's Landing on the River Murray is about 3 000 years old. Remains of dingoes are occasionally found in undisturbed contexts, but most specimens brought to light are probably domestic dogs: the differences are often very slight. The dingo was apparently responsible for the extinction on the mainland of the 'Tasmanian' wolf (*Thylacinus*) and devil (*Sarcophilus*), the most recent of these being a thylacine dated at less than 3 000 years from a cave on the Nullarbor Plain in Western Australia.

### Afterword

Vertebrate fossils are relatively rare because of a number of factors that operate from the time the animal is born: how long it lives, its habitat, where it dies, how soon and where it becomes buried, geological processes after burial, erosion, and discovery.

Vertebrates differ from most other animals (except arthropods) in having skeletons composed of a large number of articulated parts (bones). Upon death, these parts are often scattered before burial, so most vertebrate fossils are isolated bones or teeth.

Unless they are large and/or fractured, such specimens may be easily and safely collected. However, occasionally a partial or even complete skeleton is fossilised and collection of this is a long, painstaking and specialised task. When such a specimen is discovered, the only proper course of action is to notify the State Museum's palaeontologist as soon as possible, giving detailed information and description with a photograph or sketch of the specimen as it appears. A site marker and protection against rain or wandering stock is sometimes advisable.

Every specimen is potentially valuable from the scientific viewpoint. Many specimens are found purely by chance (less frequently now that mechanisation has taken over so many outdoor activities), while others have been painstakingly sought by palaeontologists after discovery of a clue, or even just the belief that 'something should be there!'

### Suggested Reading

Colbert, E. H., 1969. Evolution of the Vertebrates, 2nd edn.  
John Wiley & Sons, New York.

Mincham, H., 1979. Prehistoric Australia. Budget Books, Melbourne.

## PART 2

# EXPLORATION AND COLONISATION

### EXPLORATION BEFORE COLONISATION

The Dutch made the first recorded discovery of Australia in 1606 on the Gulf of Carpentaria, and Dutch ships were sighting Western Australia from 1616 onwards. It was in 1627 that the first part of the South Australian coast was discovered when the *Gulden Zeepaard* under the command of Francois Thyssen examined the coastline from Cape Leeuwin to the islands of St Francis and St Peter in the far west of South Australia. On board the *Gulden Zeepaard* was Pieter Nuyts, 'Councillor Extraordinary of India', after whom this area was named 'A Landt Van P. Nuyts'.

As the South Australian coast presented no evidence of prospects for trade, the Dutch, being essentially a trading nation, were not inclined to closer investigation. Indeed, so little interest was displayed in this section of the Australian coastline that it was 165 years before the next recorded sighting of South Australia was made, and this was by a French explorer.

Rear-Admiral D'Entrecasteaux, who had been searching all around Australia for the lost French explorer La Perouse, sighted land south of Cape Leeuwin in December 1792 and examined the cliffs of the Great Australian Bight. He sailed to the head of the Bight, but then after so many miles of barren coast abandoned hope of finding anything other than desolate country, and sailed south for Van Diemen's Land (Tasmania). The early impressions of the South Australian coast were therefore most unfavourable and tended to discourage further investigation.

The British who followed were far more interested in the possibility of colonisation to help ease their population problem at home, and consequently, once the effects of early discouragement had worn off, they began to take an interest in South Australia as a

possible site for a new colony. Lieutenant James Grant was the first British explorer to sail along the South Australian coast, sighting the extreme easterly shores of South Australia about 1800. While in Cape Town he had been informed of the discovery of Bass Strait and was instructed to sail through it in the *Lady Nelson* on his way to Port Jackson. Sailing along the extreme south-east coast he named Cape Banks, Cape Northumberland, Mount Schank and Mount Gambier.

The first notable British contribution to the exploration of the South Australian coast came, however, with the voyages of Matthew Flinders in the *Investigator*. With the support of the President of the Royal Society, Sir Joseph Banks, Flinders sailed from England on 18 July 1801. On his voyage of circumnavigation of the Australian continent he thoroughly explored the coast of South Australia between January and April 1802. In addition he discovered the Gulfs and Central Highlands, thus solving the question of whether a north-south strait divided the Australian continent in two. More important was the fact that Flinders reported very promising country for settlement. Many places along the coast carry the names given by Flinders; several of these were named after places in his home county of Lincolnshire, e.g. Port Lincoln, Sleaford, the Althorpes and Boston Bay, while others include unusual names such as Backstairs Passage, The Pages, and Antechamber Bay. Flinders was in fact the first man to explore South Australian waters between Nuyts Archipelago and Encounter Bay. It was at Encounter Bay on 8 April 1802 that he met Captain Nicholas Baudin, the French explorer, heading along the coast from the east in *Le Geographe*.

Baudin, in command of *Le Geographe* and accompanied by *Le Naturaliste*, left Le Havre in October 1800 with instructions to explore several specified regions including the then unknown portion of the southern coastline of Australia. After being delayed in the East Indies and Van Diemen's Land, Baudin sailed westward and charted the mainland coast from Western Port to Encounter Bay, where he met Flinders. The object of Baudin's expedition was to make scientific discoveries on behalf of Napoleon, but he had wasted considerable time *en route*. Thus most of the South Australian mainland coast was discovered before him by Grant and Flinders, and he was the original explorer of only a small section between Cape Banks and Encounter Bay. Some French names still remain, for example Lacepede Bay, Guichen Bay and Rivoli Bay. After the meeting at Encounter Bay, Baudin sailed further westward and along the northern shore of Kangaroo Island to Murat Bay, before being forced to abandon further exploration and to return to Port Jackson in June 1802. However, after re-equipping his expedition and with the addition of another ship (*Casuarina*) for charting work in shallow waters, Baudin returned to the South Australian coast by way of King Island in Bass Strait. Leaving King Island on 27 December Baudin in *Le Geographe* and Freycinet in command of *Casuarina* headed direct for Kangaroo Island where they circumnavigated the whole island and charted its coast, being the first to chart its southern and western shores. This was to be the last major contribution made by an official French expedition to exploration of the South Australian coast.

Although these discoveries on the South Australian coast did not lead to any immediate colonisation, there began an increasing series of visits by sealing vessels to Kangaroo Island. A group of American sealers built a schooner on the island in 1804, while wild gangs of sealers and runaway convicts were forming settlements from 1806 onwards. In addition, French exploration in the area had led to a fear on the part of the British authorities that it might result in French colonisation, and, although not greatly valuing the area for itself, the British would have found it an embarrassment to have the French settled on the Australian continent. As a result, in 1804, the British sent Grimes, a government surveyor, to Kangaroo Island to report on it as a possible site for colonisation. The Grimes Report was most unfavourable, stating that the soil was poor and that

the island lacked fresh water. On the other hand, in 1819 a Captain Sutherland visited the island and wrote an over-optimistic report on its future. It was this report which later led the South Australian Company into establishing their first station there in 1836.

In the period between 1804 and 1836 a number of further discoveries took place at various parts of the South Australian coastline by Captains Dillon (1815-16), Goold (1827-28), Hart (1831-33), and Jones (1833-34), together with the discovery of Lake Alexandrina by a group of sealers in 1828. Reports of this period were marked by contradictions regarding the suitability of South Australia for settlement. However, contradictory as were these accounts reaching England, they managed to convince the founders of South Australia even before 1830 that the available fertile land was more than adequate for the founding of a colony.

The most significant explorations of the period immediately before colonisation were those of Captain Charles Sturt, who explored the Murray River from New South Wales down to its mouth; traversed Lake Alexandrina and located the Goolwa channel, reaching the western shore of the Murray mouth on 12 February 1830. Captain Sturt's journey has become something of an epic in Australian history; with a small party of soldiers and convicts he rowed 2 700 kilometres on the Rivers Murrumbidgee, Darling and Murray. They suffered from desperate weariness, endured a distressing lack of provisions, and were periodically attacked by Aborigines. However, the main object of Sturt's journey was accomplished; the settling of the long insoluble 'problem of the rivers' of south-eastern Australia. But the real significance to South Australia was more than the mere settling of what was little more than an academic question, for his discoveries opened up 3 200 kilometres of navigable inland waterway and gave to Gulf St Vincent, which lay so near the mouth of the Murray, a new significance. It was the age of canal building in Europe and of the development of the Mississippi in America, so that navigable water was considered of prime importance. The exuberance felt by everyone interested in South Australia at such a discovery is typified by the Wakefield theorists who believed that the entire produce of eastern Australia would eventually be shipped from this area. In fact, the Murray became the grand attraction of the scheme. However, Sturt's own fervour at this stage was somewhat cooler than that of interested persons in England for there was one great disappointment which marred his discovery—the Murray lacked a sufficiently safe navigable mouth. Sturt found that the Murray flowed into a series of shallow lakes and a sand-blocked mouth. So little did Sturt's contemporaries understand the earth movements and land formation of the area, that their only conclusion was that there must somewhere be another channel emptying the waters of the Murray into the sea. So, the 'problem of the rivers' was replaced by the 'mystery of the Murray mouth'—and official action was to be taken promptly to solve this mystery.

Governor Darling of New South Wales sent Captain Collet Barker to the southern coast to try to solve the mystery of the Murray. Barker, landing at Noarlunga on 17 April 1831 ascended Mount Lofty and then returned to his ship, the *Isabella*, and examined Port Adelaide. After landing again at Rapid Bay, he crossed the hills to the Murray, thus proving that the river had no westerly outlet. Barker's expedition came to a tragic end when, under mysterious circumstances, he was apparently murdered at the Murray mouth by the usually peaceable Narrinyeri natives. This was the first of a long series of tragic deaths, mainly arising out of navigational difficulties, in the area of the Murray mouth which tended to discourage navigation later. Barker's party, however, reported fertile country in the region and the existence of a pass from the Murray mouth to Rapid Bay on Gulf St Vincent. While Barker's expedition proved without doubt that there was no really navigable connection between the Murray and the sea, it added to the rapidly growing volume of favourable accounts of the fertility of the region around Gulf St Vincent. Interested people in England were so obsessed with the geographical fact of the

great Murray waterway opening up the centre of Australia that they barely registered the unfavourable accounts of its egress to the sea.

Probably the greatest encouragement for the settlement of South Australia came from Charles Sturt himself who, after his return to Sydney in May 1830, wrote *Two Expeditions into the Interior of Southern Australia* (published in 1833), in which he said: 'My eye never fell on a country of more promising aspect, or more favourable position, than that which occupies the country between the lake and the ranges of St Vincent's Gulf, and continuing northward from Mount Barker, stretches away without visible boundary'. This glowing report, together with that of Barker's expedition, was welcomed by those in England seeking a suitable site to establish a colony where the principles of the Wakefield Plan could be applied without restriction. Sturt spared no efforts in converting opinion to the potentialities of South Australia and, as well as his *Two Expeditions*, he wrote a private letter to the Colonial Office on 17 February 1834. Sturt actually marked the present position of the Outer Harbor at Port Adelaide as the proper and natural site for the capital. 'It is in the angle formed by the creek with the coastline that I would recommended the formation of a township, . . . because it appears to me that when the distant interior shall be occupied and communication established with the lake and valley of the Murray, the banks of this creek will be the proper and natural site for the capital. . . . The level country to the north would be overspread, the valley of the Murray would be peopled, every available spot would be located, and its numerous ramifications would afford pasture for thousands of cattle'. In his reasons for this opinion he showed more foresight than he was to do later when, in disagreement with Colonel Light, he supported those who wished to move the capital to Encounter Bay.

Colonel William Light, who had been appointed Surveyor-General of the new colony, sailed from England in the *Rapid* on 4 May 1836 with instructions to select a site for the capital of the colony. After a brief visit to Encounter Bay, which he found unsuitable, he landed at Nepean Bay on Kangaroo Island where some South Australian Company ships had already established a settlement.

From here Light explored the east coast of Gulf St Vincent. Then, pressed for time by the unexpected arrival of the new settlers, he was able to make only a quick trip to Port Lincoln and a brief inspection of part of the west coast of Gulf St Vincent before, in concurrence with Sturt's earlier opinion, he decided that the most suitable site for Adelaide was on the banks of the small, but centrally situated, River Torrens.

### COLONISATION

The colonisation of South Australia was in itself an experiment involving certain new principles and was to represent a turning point in British colonial policy. The period was conducive to colonisation as in Britain there was wide-spread unemployment and poverty, the popular remedy for which was emigration. Nevertheless the somewhat revolutionary nature of the plans was to result in seven years of negotiation and considerable modification of early ideas before the colonisation of South Australia was finally approved.

The theoretician was Edward Gibbon Wakefield, whose ideas were contained in a number of writings including the now famous *A Letter from Sydney* series, written in 1829 while he was imprisoned in Newgate Gaol. Wakefield's plans involved three broad principles: the sale of land; the use of the receipts for sponsoring emigrants; and the granting of some measure of self-government. Drawing on developments in New South Wales, Wakefield argued that the then current system of giving away vast tracts of land to settlers resulted in an imbalance between land and labour. It was therefore desirable to restrict land distribution and increase the labour supply, and this could be done by

selling land at a suitably high price to prevent all labourers becoming landowners and by devoting the proceeds to free passage for a carefully selected labour force.

At the same time, following conflicting observations by early explorers, encouraging reports of the South Australian coastline filtering in from traders and seamen gave rise to moves for the practical application of Wakefield's ideas for the founding of a colony in South Australia.

The first attempt to form a colony was made by Robert Gouger who, having met Wakefield in Newgate Gaol in 1829, was so impressed with his ideas as to approach certain interested parties with a view to purchasing a tract of land in South Australia. He was unable, however, to gain sufficient support to interest the Colonial Office in his plans. In 1830 the National Colonization Society was formed with Gouger as its secretary. The Society served to further disseminate Wakefield's principles, but was not directly associated with plans for a colony in South Australia.

Renewed interest in colonisation followed the first of Captain Sturt's enthusiastic reports of the land of the lower Murray and in 1831 a group of intending settlers, still enthused with the ideas of Wakefield, formed the South Australian Land Company. A committee headed by Colonel Robert Torrens approached the British Government for a charter and then made preparation for the first voyage. The Government was not prepared to grant the necessary territory, and negotiation continued until 1833 when the Company finally conceded that the Government was unlikely to approve any plans involving a chartered colony.

From the same core of enthusiasts who had supported this and earlier ventures there emerged in 1834 the South Australian Association. This group was prepared to abandon hopes for a chartered colony, conceding the issue of self-government, provided that the enabling legislation accommodated Wakefield's other principles for land sales and migration. The passage of the legislation was by no means smooth; the scheme was new and involved untried principles, and knowledge of the territory was still extremely limited. Doubts on the suitability of the site were to be largely dispelled by the writings and personal representations of Sturt and the confirmatory expedition by Barker, and finally in July 1834 legislation for a colony in South Australia was put before Parliament. This legislation represented a considerable compromise on earlier plans.

The South Australian Colonization Act (4 & 5 William IV, Cap. 95) was assented to on 15 August 1834; the persistent efforts of Gouger, Torrens, and many others for a settlement in South Australia had finally borne fruit, and at least some of the ideas of Wakefield were to be tried. The territory allotted under the Act embraced 802 508 square kilometres, with the western boundary the 132nd meridian of east longitude and the other boundaries virtually as they are today. The colony was to be opened to settlement by British subjects, but under no condition were convicts to be admitted, making South Australia the only State to be settled entirely by free persons. Authority was to be divided, with the Colonial Office through the Governor controlling all affairs of government except land sales and immigration, these fields being reserved to a Board of Commissioners. Provision was made for self-government upon the population reaching 50 000. All land alienated by the Crown was to be sold at a price of not less than '12 shillings' (\$1.20) per acre and the whole of the proceeds used in 'conducting the emigration of poor persons from Great Britain and Ireland'.

Although Parliament was prepared to authorise the experiment it was not prepared to finance it; the colony was to be self-supporting. The Commissioners were accordingly authorised to borrow \$400 000 against future general revenue to finance the founding of the colony and the establishment of government, and \$100 000 against the sale of land to start the migration program. Finally, the Act contained two conditional clauses which were to harass the whole venture and served to delay colonisation another twelve

months. The first of these conditions, which were to be satisfied before the Commissioners could exercise their general powers, required that government securities to the value of \$40 000 be lodged as a guarantee for the venture. Secondly, land to the value of \$70 000 was to be sold before settlement.

A Board of Commissioners with Torrens as Chairman was appointed early in 1835. The Board immediately offered land in the new colony at \$2 an acre including rights to a city acre with every 80 acres of rural land. In spite of considerable publicity, unsurveyed land in an unknown colony proved difficult to sell, and with less than half the land sold the price was reduced to the permitted minimum of \$1.20 an acre. Finally, George Fife Angas, a member of the Board, together with two others took up the balance of the land on behalf of the South Australian Company, which was then in the process of being formed.

In December 1835 with sufficient land sold and with the \$40 000 guarantee lodged with the Treasury, the Commissioners were free to begin the business of colonisation. The South Australian Company was formed in January 1836, and in February two ships of the Company, the *John Pirie* and the *Duke of York*, sailed for Kangaroo Island to establish a settlement. Another Company ship the *Lady Mary Pelham* followed later.

The *Cygnet* carrying the Deputy Surveyor, G. S. Kingston and his staff left at the end of March and the *Rapid* with Colonel William Light, Surveyor-General, on board departed at the beginning of May. One of Light's most important tasks was to choose a site for the first settlement and details of his early movements are given on page 45. The first Company vessels reached Kangaroo Island in July, and colonists arrived at Adelaide from early November. The first Governor of the colony, Captain John Hindmarsh RN, arrived at Holdfast Bay on 28 December 1836 and the new colony was officially proclaimed on the same day. By this time some 300 colonists were already in residence. Hindmarsh was to remain in the colony for eighteen months, a period marked by political feuding and very little progress.

The one outstanding feature of the first two years was the work of Light. Expected to carry out difficult tasks with an inadequate staff Light first had to contend with opposition to his choice of a site for Adelaide. His views prevailed and the city was surveyed to his plan and the land was allotted by March 1837. There were 700 one-acre lots in Adelaide south of the River Torrens and 342 one-acre lots in North Adelaide. Victoria Square was situated in the centre of the City and there were four other squares in Adelaide as well as one in North Adelaide. An important feature in Light's plan was the extensive parklands surrounding the City.

The survey of country land for the preliminary purchasers proceeded very slowly and it was not until May 1838 that the first ballot for country sections was held. At the same time the survey staff were becoming increasingly disgruntled with the unrealistic demands of the Commissioners and in June almost the entire staff resigned. Light died in October 1839.

While the preliminary survey was in progress the settlers remained in Adelaide where their energies and resources were largely devoted to speculation in town lands and in land orders, and where supplies had to be imported with a corresponding outflow of capital. Superimposed on this situation was the continual arrival of new immigrants who served only to increase the volume of the unemployed.

Much of the inactivity of the colony was brought about by constant clashes between Hindmarsh and the Resident Commissioner J. H. Fisher, which finally led to the dismissal of Fisher and the recall of Hindmarsh in July 1838. It was realised that the divided authority as incorporated in the Colonization Act was impracticable, and the next Governor, Colonel George Gawler, was authorised to represent both the Crown and the Commissioners.

Appalled at the stagnation of the colony, Gawler immediately undertook a liberal spending program. Surveying was considerably increased with the result that 200 000 hectares had been surveyed by mid-1841. At the same time an extensive public building and works program provided relief for the unemployed. Generally, Gawler created a renewed state of optimism which remained until 1840 when land values were depreciated and sales declined. Immigrants continued to arrive throughout this period.

Most of Gawler's expenditure was met by bills drawn on the Commissioners in London. In 1841 a situation was reached where the Commissioners could no longer honour these bills and Gawler was summarily replaced by Captain George Grey. The Imperial Parliament met the bulk of the debts, and in 1842 the Board of Commissioners was abolished. Thus the small measure of independence which the Board represented disappeared and South Australia became an ordinary Crown Colony.

The term of office of Grey was in contrast to that of Gawler, with Grey imposing rigid economies. Public expenditure was cut and considerable unemployment with its accompanying hardships followed. Speculation ceased and the unemployed gradually left Adelaide to be absorbed on the lands which Gawler had opened up. By this time the flow of immigrants had ceased with the suspension of the assisted migration scheme.

By 1844 the colony was producing wheat in excess of its needs and when Major Robe succeeded Grey as Lieutenant-Governor in 1845, South Australia finally became self-supporting. Moreover prosperity was on the doorstep; copper had been located at Kapunda in 1843 and a major find was made at Burra in 1845. Heavy immigration followed these discoveries and continued until the Victorian gold rush. Copper soon became the principal export, with wool providing a complementary cargo. In addition, the repeal of the Imperial Corn Laws in 1846 and the Navigation Acts in 1849 strengthened the export trade in grain.

The discovery of gold in Victoria in 1851 had a two-fold influence on the development of South Australia. In the first place it drained off a large proportion of the skilled artisans and forced the closing of the copper mines. Secondly it gave great impetus to agriculture when the price of wheat rose sharply—the feeding of the miners became as attractive a proposition as was the actual mining. Four years later, when the miners returned, many of the more fortunate purchased land with their winnings.

At the same time political changes were taking place and in 1856 South Australia attained self-government.

### EXPLORATION AFTER COLONISATION

Only a minor portion of the area proclaimed as South Australia was to prove economically viable, but extensive exploration with its accompanying hardships was necessary to establish this fact. Post-colonisation exploration was of two forms; the first being the continuous process of discovery as settlers sought grazing and crop lands and sometimes mineral resources, and the second the more deliberate activities of the professional explorers as they sought to cover vast distances through unknown terrain.

The earliest exploratory moves of the colonists were directed towards establishing an overland route between Adelaide and Encounter Bay, and in discovering a north-easterly passage to the River Murray that would by-pass the Mount Lofty Ranges. Contact was first made with Encounter Bay in about July 1837 by Colonel Light and J. H. Fisher, and in December of the same year an expedition by Strangways and Hutchinson played a further important part in making contact with the River Murray by driving a bullock cart across the ranges to Encounter Bay, and then exploring the Murray mouth, the Goolwa channel and the southern part of Lake Alexandrina. The north-easterly route to the Murray was first traversed successfully early in 1838. Penetration of the Mount Lofty

Ranges began in 1837, and by the end of the year parties had crossed the ranges and descended to Lake Alexandrina.

From the beginning of 1838 attempts were made to open up stock routes from the eastern States. Joseph Hawdon and Charles Bonney were the first to make an overland cattle drive to Adelaide. Leaving Hawdon's station near Albury on 13 January 1838 with a party of seven men, they took a route which followed the Murray for much of the way, and reached Adelaide in eleven weeks with the cattle in good condition and only four head out of 300 lost *en route*. At the same time Edward John Eyre was making a similar cattle drive, but after unsuccessfully trying to find a suitable trail south of the Murray, he was forced to make his way back to the Loddon River and then follow the trail taken by Hawdon and Bonney. In another journey starting in 1838, Eyre became the first to bring sheep overland to Adelaide, driving 1 000 sheep and 600 cattle along the Hawdon trail. Charles Sturt was another to make an early stock drive to Adelaide, while Bonney in 1839 pioneered an alternative route which followed the south-east coast of the State and crossed the Murray above Lake Alexandrina.

Other parts of the State were also attracting attention. A section of Yorke Peninsula was visited in 1838, and in the following year a number of expeditions were made into the hinterland of Port Lincoln. Thus by 1840 the area within an 80 kilometre radius of Adelaide had been explored for pastoral, farming and mineral lands. Settlers had also ventured by boat along the Murray, by boat to Port Lincoln and thence inland, and by boat and overland to Yorke Peninsula. Reports by drovers who came down the Murray suggested that the land on the other side of the Murray was of little immediate value. It was soon to be realised, however, that very different conditions prevailed in the Lower South East, and by the mid-1840s this area was supporting a considerable sheep population.

Knowledge of the arid interior and of the far west coast was to be obtained from a number of major expeditions, the first such venture being led by Edward John Eyre. In 1839 Eyre journeyed north to Mount Arden, at the head of Spencer Gulf, where he established a base camp. From Mount Arden he made the first sighting of the dry bed of Lake Torrens. Crossing to Port Lincoln, Eyre proceeded up the west coast of the peninsula which came to bear his name, passed through Streaky Bay, and came to within 80 kilometres of the Western Australian border. The return journey to Mount Arden camp was made across the top of Eyre Peninsula.

The interest of the colonists was now divided between the country to the north, including Eyre's new-found lake, and the possibility of establishing an overland stock route to Western Australia. Eyre having just returned from the desolate country of the Great Australian Bight showed little enthusiasm for the latter idea, and in June 1840 set out for the north. From Mount Arden he made three attempts to penetrate beyond the lakes, but after following the Flinders Ranges to Mount Hopeless and making a number of observations, he concluded that Lake Torrens was a giant horseshoe-shaped salt lake forming an impassable barrier. This erroneous belief was to persist for eighteen years.

Thwarted in his efforts to go north, Eyre decided to attempt the western crossing. Leaving Mount Arden the party separated, one group going direct to Streaky Bay while Eyre went down to Port Lincoln. The party reformed at Streaky Bay and moved to Fowlers Bay, where a camp was established in November 1840. After a number of preliminary explorations around the Bight, Eyre and a small party set out for King George Sound (Albany) in February 1841, having sent the remainder of the party back to Adelaide. Eyre arrived at King George Sound in July after an extremely tortuous crossing.

In 1842 and 1843 the Surveyor-General, Colonel Frome, made two trips to the Lake Torrens region in an attempt to determine the nature of the area. However, after

reaching a 'desert-like' Lake Frome (which he believed to be part of Lake Torrens) he turned back, making two short thrusts to the east on the return journey. Frome had seen enough to be able to report that there was no country as far as the meridian 141° (and probably much beyond it) available for either agricultural or pastoral purposes.

Captain Charles Sturt, whose earlier journey down the Murray had helped precipitate the colonisation of South Australia, was again to contribute to South Australian exploration. Considerable mystique had developed concerning Central Australia, including the rumoured presence of an inland sea, and in August 1844 Sturt set out from Adelaide in an effort to unveil this area. Hoping to avoid the supposed horseshoe lake, Sturt followed the Murray and Darling Rivers to Menindee. After passing through Broken Hill and seeing Eyre's Mount Hopeless from the other side of the lakes, the party moved to Mount Poole some 300 kilometres north of Menindee. Here they rested for six months while waiting for rain to fall. In July 1845 Sturt set off in a north-westerly direction crossing Sturt's Stony Desert and the north-east corner of the State. Although temporary relief was provided by Eyre Creek, the course of which they followed for some considerable distance, the desert nature of the subsequent terrain forced the party to turn back when very close to their central goal, and only 800 kilometres from the Gulf of Carpentaria. A second assault on the desert also failed, although Sturt explored along Cooper Creek for almost 150 kilometres before returning to the base camp and thence to Adelaide in January 1846.

In 1846 John Horrocks led a small party north from his station, Penwortham, through the Flinders Ranges *via* Horrocks Pass (so named by the party) and on to a camp site at Depot Creek. The party had brought with them the only camel then in the colony, the first time one had been used for exploration work in Australia. From Depot Creek, Horrocks made two trips, the first of about 30 kilometres and the second about 100 kilometres to Lake Dutton where, jostled by his camel, he accidentally shot himself, thus bringing the expedition to an early end, but not before he had formed the opinion that there was no suitable pastoral land in that direction. Horrocks died of his wounds about three weeks later.

Further to the west a small expedition led by John Darke explored country to the north and east of the Gawler Ranges, and concluded that there was no useful land for settlers in this region. On his way home to Port Lincoln, Darke was mortally wounded by natives near what is now known as Darke Peak. In 1857 Stephen Hack explored the country west of Lake Gairdner and found useful pastoral country at the south-western end of the Gawler Ranges.

At about this time the northern lakes again became a centre of interest. In 1856 there had been considerable rainfall in the area, and when the Deputy Surveyor-General, G. W. Goyder, visited Lake Torrens he found an inland sea surrounded by excellent vegetation. Goyder's glowing report was, however, discounted by a return journey the following year. Indeed the extremely fickle seasons experienced in the north were to lead to many conflicting reports as the explorers and settlers moved northwards. Between 1857 and 1859 several exploratory expeditions visited the region of Lake Torrens and it was during this period that the myth of the horseshoe lake was destroyed. Knowledge of the lakes district was extended by B. H. Babbage, who discovered Lake Eyre in 1858, and Major P. E. Warburton, who located the first stock crossing. A. C. Gregory, coming south from Queensland in search of Leichhardt, passed between the lakes *en route* to Adelaide in 1858.

At the same time parties were searching for pastoral country in the north, with the most extensive search being made by John McDouall Stuart in 1858. Stuart, who had been in Sturt's party in 1844, set out from Mount Arden, passed to the west of Lake Torrens, and circled north of Coober Pedy, returning to Mount Arden *via* Fowlers Bay.

In the meantime the South Australian Government was offering a reward for the first successful north-south crossing of the continent, and after making two exploratory journeys to the north in 1859, Stuart set out in March 1860 to attempt such a crossing.

Stuart had an advantage over Sturt in that the intervening years had revealed the lakes to be passable and thus he was virtually able to begin his expedition at Chambers Creek at the southern tip of Lake Eyre, and to pass through known country as far as The Neales watercourse. Stuart reached the MacDonnell Ranges in the Northern Territory in April, and later the same month estimated that he had reached the centre of the continent. His attempt to reach the northern coastline was thwarted however, and in June he turned back. In a second attempt in 1861 he followed the same route and this time reached Newcastle Waters before being forced to return. At his third attempt Stuart was successful, reaching the sea on 24 July 1862 and establishing a route which was to be followed by the Overland Telegraph ten years later. A special article on the Overland Telegraph Line was included on pages 526-31 of the *South Australian Year Book* 1972.

While Stuart was making his second attempt to reach the north, the ill-fated Burke and Wills expedition was crossing the continent further to the east. Their journey took them across the north-east corner of the State along much the same path as that followed by Sturt some seventeen years earlier. In 1861 and 1862 parties led by Alfred Howitt, who left from Melbourne, John McKinlay from Adelaide, were to pass through the same area in search of Burke and Wills. After finding traces of the expedition on Cooper Creek, McKinlay pushed east and then north, to reach the Gulf of Carpentaria.

The construction of the Overland Telegraph between 1870 and 1872, and the subsequent maintenance of this link between Adelaide and Darwin, naturally led to minor exploration of the adjacent country. At this stage attention turned to the land between the telegraph line and the settlements of Western Australia. Foremost among the explorers of this region, and whose paths brought them within South Australia, were John Forrest and William Ernest Giles. In March 1870 Forrest left Perth for Adelaide, covering much the same path as Eyre had taken 30 years earlier. Forrest crossed South Australian territory again in 1874 when he travelled from Geraldton in Western Australia across the centre of the continent, coming down the Alberga watercourse to Peake telegraph station.

Giles had set out from the Overland Telegraph in 1873 at a point north of Oodnadatta, but was forced to return after covering approximately half the distance to the western seaboard. He tried again in May 1875, this time going south from Beltana to Port Augusta and then to Ooldea on a route which forty years later was to be closely followed by the east-west railway. From Ooldea the party went north for over 170 kilometres before again striking out to the west. Giles reached Perth in November, and three months later left Geraldton to return to South Australia on a route similar to that taken by Forrest two years earlier, arriving at Peake telegraph station in August 1876.

In 1873 W. C. Gosse returning from an unsuccessful attempt to reach Perth from Alice Springs, discovered and named the Musgrave Ranges.

A number of persons other than those mentioned contributed to the exploration of the State, both in the period discussed and subsequently. The inhospitable nature of the country meant that many areas had to await the coming of the aeroplane before an accurate physical description could be recorded. One such expedition was that led by Donald Mackay in 1935 when the western half of the State north of the east-west railway line was aerially surveyed.

## **PART 3**

# **CONSTITUTION AND GOVERNMENT**

### **3.1 SYSTEM OF GOVERNMENT**

South Australia is one of the six Australian States (originally constituted by Acts of the Imperial Parliament) which at Federation in 1901 ceded many of their powers on matters of national importance (*e.g.* international affairs and defence) to the Commonwealth of Australia. From time to time other powers on matters of local importance have been delegated to local governing bodies. As a result the people of South Australia are subject to the laws of a three-tier system of government. In addition statutory powers within specified fields are exercised by certain public corporations such as the State Bank of South Australia, the Electricity Trust of South Australia, the South Australian Housing Trust and the South Australian Meat Corporation.

Both the Commonwealth and the South Australian Parliaments are bicameral: in each the leader of the Government (the Prime Minister of the Commonwealth and the Premier of South Australia) is seated in the Lower House and in each the Upper House has restricted powers concerning money Bills.

#### **Electorates**

The State is a single multi-member electorate for elections for both the Commonwealth (Senate) and South Australian (Legislative Council) Parliaments. There are ten members elected from South Australia to the Commonwealth Senate; these members are elected for a period of six years with half of them generally retiring each three years.

The South Australian Legislative Council consists of twenty-two members elected for a term of six years, with eleven generally retiring each three years. Before the last general election there were twenty-one Legislative Councillors, eleven having been

elected under the present system which was introduced by the Constitution and Electoral Acts Amendment Act, 1973 and ten under the system which applied before the election of 12 July 1975.

Although it is the respective Parliaments alone which have the power to make changes in the number, size, and distribution of electorates, it is customary to appoint electoral commissions to recommend in these matters.

The terms of the Commonwealth Constitution provide for changes in House of Representatives electorates in certain eventualities. Because of a prescribed relationship between population and the distribution of House of Representatives electorates, the Chief Australian Electoral Officer determines the representational entitlement of the States during each Parliamentary triennium, based on the latest available statistics prepared by the Australian Statistician (rather than on Census figures). Should the representation entitlement of any State change consequent upon such a determination, a redistribution is required.

In South Australia the boundaries of electorates are defined in a schedule to the State Constitution, and these have been changed from time to time on the recommendations of various electoral commissions which were appointed at irregular intervals with specific instructions as to how they should divide up the State. However, following an amendment to the Constitution in 1975, a permanent Electoral Commission was appointed in 1976 with instructions to divide the State into forty-seven House of Assembly electoral districts, each district having the same number of electors, with a maximum tolerance of ten per cent from the electoral quota. This Commission also has the duty to review boundaries periodically to maintain equal numbers of electors in electorates.

### **Party System**

Most members of both the Commonwealth and the South Australian Parliaments are elected by the voters from candidates pre-selected and endorsed by the major political parties. Once policy has been determined at a party meeting, members generally observe party solidarity; speaking, voting, and acting in accordance with that policy both in and out of Parliament whether the party be in government or in opposition.

### **Cabinet and Executive Government**

Both in the Commonwealth and in South Australia, executive government is based on the system which was evolved in Britain in the eighteenth century and which is generally known as 'cabinet' or 'responsible' government. Its main principles are that the head of the State, Her Majesty the Queen (or her representative, the Governor-General or Governor, acting on her behalf) should perform governmental acts on the advice of her ministers; that she should choose her principal Ministers of State from members of Parliament belonging to the party or coalition of parties commanding a majority in the popular House; that the Ministry so chosen should be collectively responsible to that House for the government of the State; and that the Ministry should resign if it ceases to command a majority there.

The cabinet system operates chiefly by means of constitutional conventions, customs or understandings and through institutions that do not form part of the legal structure of government at all. The executive power of the Commonwealth is exercisable by the Governor-General and that of South Australia by the Governor, each being advised by an executive council which only meets for formal purposes. The whole policy of a Ministry is in practice determined by some or all of the Ministers of State, meeting without the Governor-General or Governor under the chairmanship of the Prime Minister or Premier. This group of Ministers is known as the Cabinet.

### *The Cabinet*

The Cabinet does not form part of the legal mechanism of government. Its meetings are private and deliberative, the actual Ministers of the day alone are present, no records of the meetings are made public and the decisions taken have in themselves no legal effect. At present the fourteen senior Ministers of the Commonwealth Government constitute the Cabinet and other Ministers only attend Cabinet meetings when required, but from 1972 to 1975 all Ministers were members of the Cabinet. In South Australia, all thirteen Ministers are members of Cabinet.

As Ministers are the leaders of the party or parties commanding a majority in the popular House, the Cabinet substantially controls not only the general legislative program of Parliament, but the whole course of Parliamentary proceedings. In effect, though not in form, the Cabinet, by reason of the fact that all Ministers are members of the Executive Council, is also the dominant element in the executive government of the State. In summoning, proroguing or dissolving Parliament, the Governor-General or the Governor is usually guided by the advice tendered him by the Cabinet through the Prime Minister or Premier, although legally the discretion is vested in the Governor-General or Governor himself.

### *Executive Council*

The Executive Council is usually presided over by the Governor-General or Governor, the members holding office during his pleasure. All Ministers of State must be members of the Executive Council. Commonwealth Ministers remain members of the Executive Council on leaving office, but are not summoned to attend its meetings, for it is an essential feature of the cabinet system that attendance should be limited to the Ministers of the day.

The meetings of the Executive Council are formal and official in character and a record of proceedings is kept by the Secretary or Clerk. At Executive Council meetings the decisions of Cabinet are, where necessary, given legal form, appointments are made, resignations accepted, proclamations issued and regulations approved.

### *Appointment of Ministers*

Legally, Ministers hold office during the pleasure of the Governor-General or Governor, but in practice the discretion of the Queen's representative in the choice of Ministers is limited by the conventions on which the Cabinet system rests. When a Ministry resigns the Crown's custom is to send for the leader of the party which commands, or is likely to be able to command a majority in the popular House, and to commission him, as Prime Minister or Premier, to 'form a Ministry'—that is, to nominate other persons to be appointed as Ministers of State and to serve as his colleagues in the Cabinet.

### *Committees*

At one stage in the consideration of every Bill each House resolves itself into Committee for freer discussion of proposed legislation than would be possible under the rules of formal debate usually applied in Parliament.

In addition there is a Committee system whereby a limited number of Members inquire into and report on particular matters, thus enabling a greater volume of work to be handled more effectively. There are Joint Committees, consisting of members of both Houses, and each House has committees to attend to its own functions. Standing Committees (*e.g.* the South Australian Public Works Standing Committee) consider matters of a continuing or recurring nature, and *ad hoc* committees are formed to inquire into and report on specific matters as they arise.

Party representation on Joint and House Committees is usually proportionate to representation in Parliament or the appropriate House respectively.

#### **Administration**

The pattern of public administration in South Australia is determined by the division and delegation of statutory authority already mentioned. Various aspects and areas of administration are attended to by Commonwealth and South Australian Government departments, by local government authorities, and by public corporations deriving authority and responsibility from either Commonwealth or South Australian legislation. Within this framework numerous boards and committees exercise administrative and, in some cases, judicial powers.

These various levels of administration are largely interdependent and complementary. Some items of Commonwealth legislation are completely, or almost completely, administered by State authorities, often in matters in which (the Commonwealth and the State having concurrent powers) Commonwealth legislation either supplements or supersedes State legislation, e.g. the Births, Deaths and Marriages Registration Branch applies the *Marriage Act* 1961 in this State. Performance of State functions by Commonwealth authorities is neither as frequent nor as extensive, but there are instances of the provision of services or facilities, e.g. the Commonwealth Electoral Office maintains the House of Assembly electoral roll; State land tax may be paid at Post Offices.

#### **Judicature**

The degree to which South Australians are subject to the jurisdiction of Commonwealth and South Australian courts respectively varies with the type of action. Most criminal and civil actions are heard, at least originally, in State courts, but many individuals are subject exclusively to jurisdiction of Commonwealth courts in industrial matters.

Generally speaking, the decisions of the lower courts (the South Australian Magistrates and Local Courts) may be the subject of appeal to the State Supreme Court, and the decisions of this higher court, acting in either its original or appellate jurisdiction, may be the subject of appeal to the High Court of Australia.

Included in the jurisdiction of the High Court of Australia is the review of legislation to test its constitutional validity.

## **3.2 COMMONWEALTH GOVERNMENT**

#### **Federation**

The Commonwealth of Australia was proclaimed on 1 January 1901 in 'An Act to constitute the Commonwealth of Australia', a statute of the Imperial Parliament, which received Royal Assent in July 1900. The draft constitution, which was enacted with only minor amendment, had been prepared at intercolonial conferences during 1897, 1898, and 1899, and was accepted at referenda during 1899 by South Australia, New South Wales, Victoria, Queensland and Tasmania, and in 1900 by Western Australia.

#### **Separation of Powers**

The Constitution provides, in Sections 52, 69, 86, 90 and 115, for certain powers to be vested exclusively in the Commonwealth Government and, in section 51, for certain specified fields of interest to be common to both the Commonwealth and State Governments; in cases of conflicting legislation, that of the former prevails to the extent of the inconsistency. All other fields of interest remain the exclusive province of the State

Governments until amendment is made to the Constitution Act or until the State Parliaments cede particular powers.

#### **Financial Resources**

Since Federation the distribution of financial resources between the Commonwealth and State Governments has been an almost constant problem. Under the original terms of the Constitution three-quarters of the net revenues from the duties of customs and excise, for ten years, was returned to the States; provision also existed for general and particular grants to the States. Significant changes have been made in the distribution of financial resources since 1910. These are reviewed in some detail in Part 11—Public Finance.

### **COMMONWEALTH LEGISLATURE**

The Constitution provides that 'the legislative power of the Commonwealth shall be vested in a Federal Parliament, which shall consist of the Queen, a Senate, and a House of Representatives'. Provision for constitutional amendment includes a requirement that a proposed amendment must be submitted to a referendum.

#### **Franchise**

Qualifications for franchise are possessed by any British subject, not under eighteen years of age and not disentitled on other grounds, who has lived in Australia for six months continuously. Residence in a subdivision for a period of one month before enrolment is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory except that the compulsory enrolment provisions do not relate to Aboriginal natives of Australia.

A member of the Defence Forces on service outside Australia who is a British subject not less than eighteen years of age and has lived in Australia for six months continuously is entitled to vote at Commonwealth elections, whether enrolled or not.

Persons of unsound mind, attainted of treason, convicted and under sentence for any offence punishable by imprisonment for one year or longer or, persons who are holders of temporary entry permits under the *Migration Act* 1958 or are prohibited immigrants under that Act are excluded from the franchise.

#### **Membership**

Qualifications necessary for membership of either House of the Commonwealth Parliament are possessed by any British subject, eighteen years of age or over, who has resided in Australia for at least three years and who is, or is qualified to become, an elector. The principal reasons for disqualification of persons otherwise eligible as members of either House are; membership of the other House, allegiance to a foreign power, being attainted of treason, being convicted and under sentence for any offence punishable by imprisonment for one year or longer, being an undischarged bankrupt or insolvent, holding office of profit under the Crown (with certain exceptions), or having pecuniary interest in any agreement with the Public Service of the Commonwealth except as a member of an incorporated company of more than twenty-five persons.

### **EXECUTIVE GOVERNMENT**

#### **Governor-General**

On 8 December 1977 His Excellency Sir Zelman Cowen, AK, GCMG, QC, was sworn in as the nineteenth Governor-General of the Commonwealth. His authority as the Queen's representative is derived from Letters Patent, instructions under the Royal Sign Manual and Signet, and the relevant sections of the Commonwealth Constitution.

**Executive Council**

Members of the Federal Executive Council are chosen, summoned and sworn by the Governor-General and hold office during his pleasure. All Ministers are members. Councillors usually retain membership for life but it is customary for attendance at meetings to be limited to Ministers of the day.

**Ministry**

Members of the forty-fifth Ministry (the third Fraser Ministry) are listed below.

**Fraser Ministry at 7 December 1979****Inner Cabinet***Prime Minister*

The Rt Hon. J. M. Fraser, CH, MP (Vic.)

*Deputy Prime Minister and Minister for Trade and Resources*

The Rt Hon. J. D. Anthony, MP (NSW)

*Minister for Industry and Commerce*

The Rt Hon. P. R. Lynch, MP (Vic.)

*Minister for Primary Industry*

The Hon. P. J. Nixon, MP (Vic.)

*Minister for National Development and Energy and Leader of the Government in the Senate*

Senator the Hon. J. L. Carrick (NSW)

*Minister for Industrial Relations*

The Hon. A. A. Street, MP (Vic.)

*Treasurer*

The Hon. J. W. Howard, MP (NSW)

*Minister for Foreign Affairs*

The Hon. A. S. Peacock, MP (Vic.)

*Minister for Defence*

The Hon. D. J. Killen, MP (Qld)

*Minister for Social Security*

Senator the Hon. Dame M. G. C. Guilfoyle, DBE (Vic.)

*Minister for Finance*

The Hon. E. L. Robinson, MP (Qld)

*Minister for Employment and Youth Affairs and Leader of the House*

The Hon. R. I. Viner, MP (WA)

*Attorney-General*

Senator the Hon. P. D. Durack, QC (WA)

*Minister for Transport*

The Hon. R. J. D. Hunt, MP (NSW)

**Outer Ministry***Minister for Health and Minister Assisting the Prime Minister*

The Hon. M. J. R. MacKellar, MP (NSW)

*Minister for Veterans' Affairs and Minister Assisting the Minister for Primary Industry*

The Hon. A. E. Adermann, MP (Qld)

*Minister for Administrative Services and Minister Assisting the Minister for Defence*

The Hon. J. E. McLeay, MP (SA)

*Minister for Productivity and Minister Assisting the Prime Minister in Federal Affairs*

The Hon. K. E. Newman, MP (Tas.)

*Minister for Post and Telecommunications*

The Hon. A. A. Staley, MP (Vic.)

*Minister for Immigration and Ethnic Affairs and Minister Assisting the Treasurer*

The Hon. I. M. Macphee, MP (Vic.)

*Minister for Education*

The Hon. W. C. Fife, MP (NSW)

*Minister for Business and Consumer Affairs and Minister Assisting the Minister for Industry and Commerce*

The Hon. R. V. Garland, MP (WA)

*Minister for Home Affairs and Minister for the Capital Territory*

The Hon. R. J. Ellicott, QC, MP (NSW)

*Minister for Housing and Construction*

The Hon. R. J. Groom, MP (Tas.)

*Minister for Aboriginal Affairs and Minister Assisting the Minister for National Development and Energy*

Senator the Hon. F. M. Chaney (WA)

*Minister for Special Trade Representations and Minister Assisting the Minister for Trade and Resources*

Senator the Hon. D. B. Scott (NSW)

*Minister for Science and the Environment*

The Hon. D. S. Thomson, MC, MP (Qld)

**Salaries and Allowances**

From 1 July 1979 the annual salary for each Senator and Member has been \$27 575 with an electorate allowance of either \$9 000 or \$13 000 depending on the area of the Member's electorate. Senators receive an electoral allowance of \$9 000.

The salaries and allowances payable to Senators and Members have effect from 23 November 1979, the day before the date of Royal Assent to Acts of Parliament which modified determinations and recommendations of the Remuneration Tribunal effective from 1 July 1979.

The following additional payments are also made:

Prime Minister—\$30 320 plus expense allowance of \$14 167;

Deputy Prime Minister—\$15 294 plus expense allowance of \$7 084;

Ministers (Inner Cabinet)—\$12 611 plus expense allowance of \$5 903;

Treasurer—\$14 221 plus expense allowance of \$7 084;

Leader of the House—\$12 611 plus expense allowance of \$7 084;

Ministers (Outer Ministry)—\$11 269 plus expense allowance of \$5 903;

Speaker (House of Representatives)—\$11 269 plus expense allowance of \$5 903;

President (Senate)—\$11 269 plus expense allowance of \$5 903;

Chairman of Committees (House of Representatives)—\$4 830 plus expense allowance of \$1 181;  
Chairman of Committees (Senate)—\$4 830 plus expense allowance of \$1 181;  
Leader of the Opposition (House of Representatives)—\$12 611 plus expense allowance of \$7 084;  
Deputy Leader of the Opposition (House of Representatives)—\$9 123 plus expense allowance of \$5 635;  
Leader of the Opposition (Senate)—\$9 123 plus expense allowance of \$5 635;  
Deputy Leader of the Opposition (Senate)—\$4 561 plus expense allowance of \$1 181;  
Government Whip (House of Representatives)—\$4 561 plus expense allowance of \$1 181;  
Opposition Whip (House of Representatives)—\$4 025 plus expense allowance of \$1 181;  
Deputy Government Whip (House of Representatives)—\$1 342;  
Deputy Opposition Whip (House of Representatives)—\$644;  
Other Whips (House of Representatives)—\$2 683;  
Government Whip (Senate)—\$3 756 plus expense allowance of \$1 181;  
Opposition Whip (Senate)—\$3 756 plus expense allowance of \$1 181.

#### Superannuation

The *Parliamentary Contributory Superannuation Act* 1948 provides for the payment of superannuation retirement benefits to or in respect of former members of the Commonwealth Parliament. Contributions by Senators and Members are compulsory.

Generally, contributions by members are at the rate of 11·5 per cent of the total of the parliamentary allowance and of any additional salary or allowance in the nature of salary payable by reason of service as a Prime Minister, a Minister, or Office-Holder in the Parliament. The contributions are reduced when a member completes 18 years parliamentary service, *i.e.* the rate becomes 5·75 per cent of the parliamentary allowance plus 11·5 per cent of the amount of any additional salary or allowance in the nature of salary received by reason of service as a Prime Minister, a Minister, or Office-Holder in the Parliament.

Members who retire involuntarily become eligible for a retiring allowance after eight years service (or less in certain circumstances) while those who retire voluntarily become eligible after twelve years service (or less in certain circumstances). A member who becomes entitled to a retiring allowance, other than on the grounds of ill-health, may elect to convert the whole or a percentage of that retiring allowance to a lump sum payment. Where there is no entitlement to a retiring allowance the benefit is a lump sum payment comprising a refund of contributions plus a supplement, the amount of which depends on whether retirement was involuntary or voluntary.

The scheme also provides for the payment of annuities to eligible widows and widowers of former members. Where the former member was in receipt of a retiring allowance at the time of death, the annuity payable is five-sixths of that allowance or, if the member had elected to commute the whole or part of that allowance, five-sixths of the allowance that would have been payable had the member not elected. Where the member died during parliamentary service, the annuity payable equals five-sixths of the retiring allowance that would have been payable to the member had the member retired involuntarily. An annuity is payable to an eligible dependant child if both parents have died.

### THE SENATE

The Senate is the Upper House. Originally it was intended that this House should protect the rights and interests of the States, but with the growth of the parliamentary system of party-line voting, its role has become mainly that of a house of review.

#### **Representation**

At present the Senate consists of sixty-four members—ten from each State, two from the Australian Capital Territory and two from the Northern Territory. The original provision was that each State, voting as a single electorate, should elect six Senators but by the Representation Act of 1948, which was effective for the 1949 elections, the number was raised to ten. By the *Senate (Representation of Territories) Act 1973*, the number of Senators was increased from sixty to sixty-four with the addition of two Senators from both the Australian Capital Territory and the Northern Territory. The Territories were represented in the Senate for the first time following the general election of 13 December 1975. Except in extraordinary circumstances each Senator is elected for a term of six years, five from each State and all Territory Senators retiring every three years.

After the election of 10 December 1977 representation in the Senate was as follows:

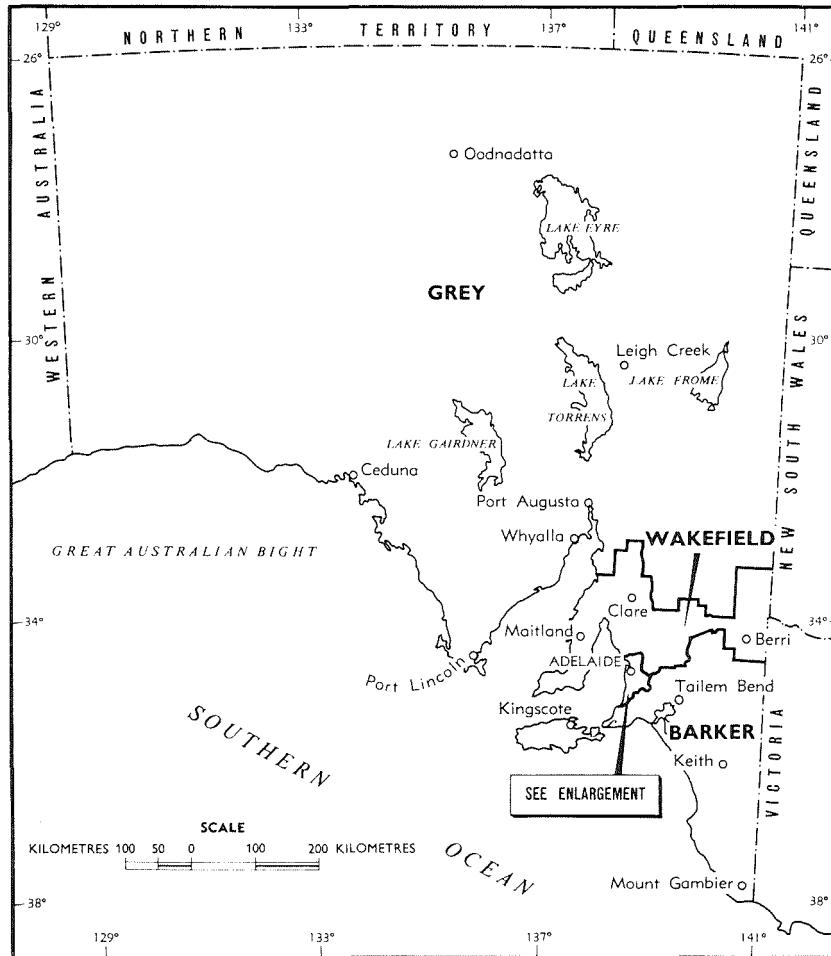
State or Territory	ALP	LP	NCP	AD	IND
New South Wales .....	4	4	1	1	—
Victoria .....	4	4	1	1	—
Queensland .....	4	3	3	—	—
<b>South Australia</b> .....	<b>4</b>	<b>6</b>	—	—	—
Western Australia .....	4	6	—	—	—
Tasmania .....	4	5	—	—	1
Australian Capital Territory .....	1	1	—	—	—
Northern Territory .....	1	—	1	—	—

ALP Australian Labor Party LP Liberal Party of Australia NCP National Country Party AD Australian Democrats  
IND Independent

#### **Elections for the Senate: Voting, South Australia**

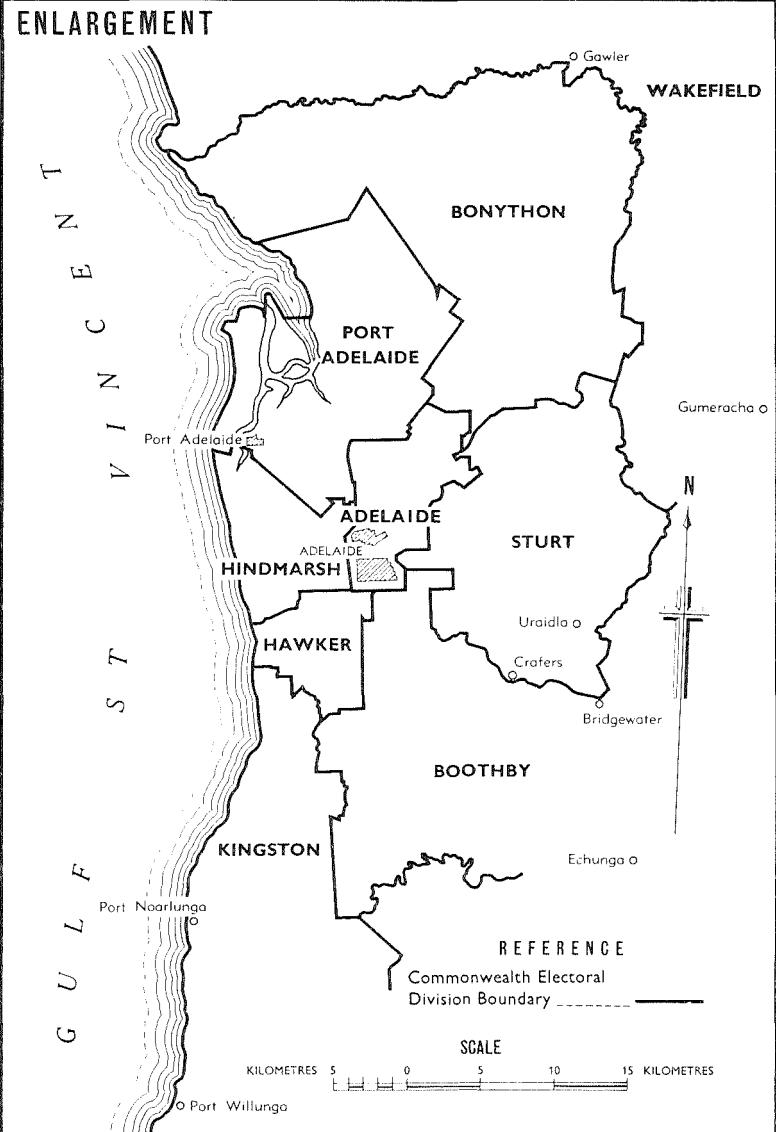
Date of Election	Electors Enrolled	Votes Recorded		Informal Votes	
		Number	Percentage of Electors Enrolled	Number	Percentage of Votes Recorded
10 December 1949 .....	434 224	420 437	96.82	48 838	11.62
28 April 1951 .....	440 454	427 593	97.08	24 792	5.80
9 May 1953 .....	453 496	437 583	96.49	21 297	4.87
10 December 1955 .....	462 747	444 827	96.13	39 802	8.95
22 December 1958 .....	490 930	473 832	96.52	36 677	7.74
9 December 1961 .....	521 396	501 312	96.15	28 284	5.64
5 December 1964 .....	551 341	528 464	95.85	39 421	7.46
25 November 1967 .....	594 480	568 823	95.68	32 864	5.78
21 November 1970 .....	639 807	609 268	95.23	42 306	6.94
18 May 1974 .....	750 308	722 434	96.28	82 191	11.38
13 December 1975 .....	789 004	759 369	96.24	75 540	9.95
10 December 1977 .....	824 205	783 669	95.08	81 451	10.39

**SOUTH AUSTRALIA  
COMMONWEALTH ELECTORAL DIVISIONS**  
As proclaimed 11 November 1977



**PORTION OF SOUTH AUSTRALIA  
COMMONWEALTH ELECTORAL DIVISIONS**

As proclaimed 11 November 1977



The members representing South Australia in the Senate are:

*To Retire 30 June 1981:*

Davidson, Gordon Sinclair (LP)  
 Bishop, the Hon. Reginald (ALP)  
 Jessop, Donald Scott (LP)  
 Cavanagh, the Hon. James Luke (ALP)  
 Laucke, the Hon. Sir Condor Louis,  
 KCMG (LP)

*To Retire 30 June 1984:*

Messner, Anthony John (LP)  
 McLaren, Geoffrey Thomas (ALP)  
 Young, Harold William (LP)  
 Elstob, Ronald Charles (ALP)  
 Teague, Baden Chapman (LP)

**Voting System**

Before the election in 1949 the system of preferential voting was used for Senate elections, but for the 1949 and subsequent elections a system of proportional representation has been used. This system was discussed in detail on pages 55-6 of the *South Australian Year Book* 1971.

### THE HOUSE OF REPRESENTATIVES

**Representation**

The members of the House of Representatives (the Lower House) are elected in single-member electorates. The number of electorates into which a State is divided is determined by the proportion that the population of the State bears to the population of the Commonwealth as a whole. Section 24 of the Constitution provides that the number of members in the House of Representatives shall be as nearly as possible twice the number of Senators and prescribes the formula to be used, 'until the Parliament otherwise provides', for allocating to each State its share of the available seats but stipulates that no original State shall have less than five members in the House. In addition one member is elected from the Northern Territory and two members are elected from the Australian Capital Territory. Preferential voting is used for elections for the House of Representatives.

**Elections for the House of Representatives: Voting, South Australia**

Date of Election	Electors Enrolled	Votes Recorded		Informal Votes	
		Number	Percentage of Electors Enrolled	Number	Percentage of Votes Recorded
29 May 1954 .....	455 872	(a) 357 854	(a) 96.77	8 812	2.46
10 December 1955 .....	462 747	444 827	96.13	18 050	4.06
22 December 1958 .....	490 930	473 832	96.52	15 619	3.30
9 December 1961 .....	521 396	501 312	96.15	15 629	3.12
30 November 1963 .....	541 536	523 135	96.60	13 963	2.67
26 November 1966 .....	585 465	563 341	96.22	16 220	2.88
25 October 1969 .....	624 626	599 719	96.01	20 562	3.43
2 December 1972 .....	671 081	644 211	96.00	16 845	2.61
18 May 1974 .....	750 308	722 434	96.28	20 311	2.81
13 December 1975 .....	789 004	759 369	96.24	18 201	2.40
10 December 1977 .....	824 205	783 669	95.08	26 461	3.38

(a) Contested electorates only.

Following an electoral redistribution of House of Representatives seats in 1977 by Federal Electorate Redistribution Commissioners, the number of members of the House of Representatives was reduced from 127 to 124. The number of South Australian seats in the House of Representatives was reduced from 12 to 11 with the seat of Angas being abolished.

After the election of 10 December 1977 representation in this House was as follows:

Party	NSW	Vic.	Qld	SA	WA	Tas.	ACT	NT	Total
ALP .....	17	10	3	6	1	—	1	—	38
LP .....	18	20	9	5	9	5	1	—	67
NCP .....	8	3	7	—	—	—	—	1	19

ALP Australian Labor Party LP Liberal Party of Australia NCP National Country Party

**House of Representatives, 1977 Election**  
**Voting and Party Representation in South Australian Electorates**

Electorate	Electors on Roll	Electors Voting	Successful Candidates		
			Name	Party	First Preference Votes
Adelaide .....	77 831	73 098	Hurford, C. J.	ALP	35 786
Barker .....	73 369	70 029	Porter, J. R.	LP	43 129
Bonython .....	73 755	69 638	Blewett, N.	ALP	33 772
Boothby .....	75 691	71 897	McLeay, Hon. J. E.	LP	40 358
Grey .....	72 751	68 935	Wallis, L. G.	ALP	31 221
Hawker .....	77 262	72 867	Jacobi, R.	ALP	31 685
Hindmarsh .....	77 158	73 627	Cameron, Hon. C. R.	ALP	38 976
Kingston .....	73 465	70 680	Chapman, H. G. P.	LP	31 254
Port Adelaide .....	75 357	71 398	Young, M. J.	ALP	40 497
Sturt .....	74 785	71 509	Wilson, I. B. C.	LP	35 300
Wakefield .....	72 781	69 991	Giles, G. O'H.	LP	42 077

**REFERENDA**

Alteration to the Constitution must be initiated in the Commonwealth Parliament and requires the approval of a majority of electors voting in a majority of the States as well as a majority of all the electors voting in the Commonwealth as a whole.

Of the thirty-six proposals so far submitted to the people of Australia for amendment to the Constitution, only eight have been approved (one in each of 1906, 1910, 1928, 1946 and 1967, and three in 1977). In addition proposals concerning compulsory overseas military service were submitted to the people in 1916 and 1917 respectively; both proposals failed to gain the necessary majority of votes.

At the most recent referendum, held on 21 May 1977, four alterations to the Constitution were proposed. Three of the four referendum proposals were approved, but the Constitution Alteration (Simultaneous Elections) Referendum was defeated because it recorded a majority of votes in only three States (although it was approved by the majority of electors in Australia).

### 3.3 GOVERNMENT OF SOUTH AUSTRALIA

The Constitution Act, 1855-1856, which inaugurated the system of responsible government in South Australia, was passed and came into force on 24 October 1856. A summary of early constitutional history and the introduction of responsible government was included on pages 60-2 of the *South Australian Year Book* 1971.

#### VICE-REGAL REPRESENTATION

Keith Douglas Seaman, OBE, was sworn in as the Queen's representative in South Australia on 1 September 1977.

The title of the vice-regal representative has been varied from time to time. The first three holders of the Office were styled 'Governor and Commander-in-Chief', the next two, 'Lieutenant-Governor', and the following two, 'Captain-General and Governor-in-Chief'. The title then reverted to its original form until Federation in 1901. Since then, because of the appointment of a 'Governor-General and Commander-in-Chief in and over the Commonwealth', the holder of the State office has been described simply as 'Governor', and this title is used in the following table, which lists occupants of the office since the foundation of South Australia.

As titular head of the Government of South Australia the Governor exercises powers, duties, and functions, similar to those of a constitutional sovereign. On the one hand he is indirectly responsible to the Imperial Parliament through the Secretary of State for Foreign and Commonwealth Affairs, and on the other hand he usually acts on the advice of his Ministers, who take the responsibility for their advice. Nevertheless, the Governor retains important spheres of discretionary action and is thus enabled to maintain something of a safeguard against malpractice and injustice, particularly in extreme circumstances. To ensure continuity of services, the Governor has power to appropriate up to one per cent of the total amount appropriated from the State's general revenue by the Appropriation Acts for public service without specific Parliamentary authority.

#### Governors of South Australia

Name	From	To
Captain John Hindmarsh, RN, KH .....	28 December 1836	16 July 1838
Lt-Col George Gawler, KH .....	17 October 1838	15 May 1841
George Grey .....	15 May 1841	25 October 1845
Lt-Col Frederick Holt Robe .....	25 October 1845	2 August 1848
Sir Henry E. F. Young .....	2 August 1848	20 December 1854
Sir Richard G. MacDonnell, CB .....	8 June 1855	4 March 1862
Sir Dominick Daly .....	4 March 1862	19 February 1868
Rt Hon. Sir James Fergusson, Bart .....	16 February 1869	18 April 1873
Sir Anthony Musgrave, KCMG .....	9 June 1873	29 January 1877
Lt-Gen. Sir Wm F. D. Jervois, GCMG, CB	2 October 1877	9 January 1883
Sir Wm C. F. Robinson, GCMG .....	19 February 1883	5 March 1889
Rt Hon. the Earl of Kintore, PC, GCMG	11 April 1889	10 April 1895
Sir Thomas F. Buxton, Bart, GCMG .....	29 October 1895	29 March 1899
Rt Hon. the Lord Tennyson, KCMG .....	10 April 1899	17 July 1902
Sir George R. Le Hunte, KCMG .....	1 July 1903	18 February 1909
Admiral Sir Day Hort Bosanquet, GCVO, KCB .....	18 February 1909	22 March 1914
Lt-Col Sir Henry L. Galway, KCMG, DSO	18 April 1914	30 April 1920
Lt-Col Sir Wm E. G. Archibald Weigall, KCMG .....	9 June 1920	30 May 1922

**Governors of South Australia (*continued*)**

Name	From	To
Lt-Gen. Sir George T. M. Bridges, KCB, KCMG, DSO .....	4 December 1922	4 December 1927
Brig.-Gen. the Hon. Sir A. G. A. Hore-Ruthven, VC, KCMG, CB, DSO ....	14 May 1928	26 April 1934
Maj.-Gen. Sir W. J. Dugan, KCMG, CB, DSO .....	28 July 1934	23 February 1939
Sir Charles M. Barclay-Harvey, KCMG	12 August 1939	26 April 1944
Lt-Gen. Sir C. W. M. Norrie, KCMG, CB, DSO, MC .....	19 December 1944	19 June 1952
Air Vice-Marshal Sir Robert A. George, KCMG, KCVO, KBE, CB, MC .....	23 February 1953	7 March 1960
Lt-Gen. Sir Edric M. Bastyán, KCMG, KCVO, KBE, CB .....	4 April 1961	1 June 1968
Maj.-Gen. Sir James W. Harrison, KCMG, CB, CBE .....	4 December 1968	16 September 1971
Sir Mark L. Oliphant, KBE .....	1 December 1971	30 November 1976
Sir Douglas R. Nicholls, KCVO, OBE .....	1 December 1976	30 April 1977
Keith Douglas Seaman, OBE .....	8 September 1977	

A Governor is normally appointed for a term of five years, but he can be reappointed for one or more subsequent terms. At present he is granted a basic salary of \$20 000 a year and an expense allowance which is altered in accordance with the Consumer Price Index number for Adelaide. The amount appropriated from Consolidated Revenue for the Governor's salary and allowances for 1978-79 was \$57 700. The Governors' Pension Act, 1976 provides for a pension to be paid to former Governors and to the spouses of deceased Governors.

In the absence or prolonged illness of a Governor other persons have been appointed to administer the government of the State. These persons have been variously styled 'Lieutenant-Governor', 'Deputy-Governor', 'Deputy Lieutenant-Governor', and 'Administrator', and several of them have held office more than once. The eighteen persons so appointed have been:

**Deputy Governors**

Name	Occupancy of Office		Occurrences in Office	Total Period	
	First	Most Recent		Years	Days
George Milner Stephen .....	16/7/1838	17/10/1838	1	—	93
Boyle Travers Finniss .....	20/12/1854	8/6/1855	1	—	170
Lt-Col Francis G. Hamley .....	19/2/1868	16/2/1869	1	—	364
Maj. James Harwood Rocke .....	6/4/1870	5/5/1870	1	—	29
Hon. Sir Richard D. Hanson .....	7/12/1872	9/6/1873	1	—	184
Rt Hon. Sir Samuel J. Way, Bart	29/1/1877	17/11/1915	65	6	117
William W. Cairns, CMG .....	24/3/1877	17/5/1877	1	—	54
Hon. James P. Boucaut .....	26/10/1885	16/9/1897	9	—	263
Hon. William H. Bundey .....	30/7/1888	9/8/1888	1	—	10
Hon. Sir G. J. R. Murray, KCMG	25/9/1916	9/2/1942	103	6	47
Hon. Thomas Slaney Poole .....	20/3/1925	22/11/1925	2	—	240
Hon. Sir H. Angas Parsons .....	11/6/1935	19/2/1942	6	—	54
Hon. Sir J. Mellis Napier, KCMG	21/4/1942	17/5/1973	179	9	140
Hon. Sir Herbert Mayo .....	15/10/1946	9/1/1965	25	—	187

**Deputy Governors (*continued*)**

Name	Occupancy of Office		Occasions in Office	Total Period	
	First	Most Recent		Years	Days
Hon. Sir G. S. Reed .....	24/7/1951	4/11/1957	5	—	31
Hon. J. J. Bray .....	25/6/1968	5/8/1973	8	—	72
Hon. D. S. Hogarth .....	8/7/1971	8/7/1971	1	—	1
Sir W. R. Crocker, KBE .....	7/9/1973	17/5/1979	26	1	6

**CABINET AND EXECUTIVE GOVERNMENT**

In South Australia all Ministers are members of the Cabinet and all Ministers are *ex officio* members of the Executive Council. Although the Governor may, subject to any law enacted by the Legislature, appoint other persons to the Executive Council, membership is in practice limited to Ministers of the day.

The Constitution Act of 1855-1856 provided that every Minister must be a member of either the Legislative Council or the House of Assembly or become a member within three months of appointment. However, in 1873 an amendment was made to the Act authorising the Governor to appoint an Attorney-General from outside Parliament; this provision was retained until 1953, and four Attorneys-General were so appointed.

The maximum number of Ministers has been varied from time to time. In 1856 the number was five; in 1873, six; 1901, four; 1908, six; 1953, eight; 1965, nine; 1970, ten; 1973, eleven; 1975, twelve and 1978, thirteen. In 1908 it was specified that no more than four Ministers were to be in the House of Assembly, but in 1953 this limit was increased to five, in 1965 to six, in 1970 to seven and in 1973 to eight. This restriction on the number of Ministers from the lower House was removed by the Constitution Act Amendment Act (No. 2), 1975, and now it is permissible for all Ministers to be selected from the House of Assembly.

The Constitution of 1856 provided for salary payments to Ministers only and salary payments to other members did not commence until 1887. For details of salaries and allowances paid to members of Parliament see page 72.

Cabinet, as such, has no legal powers. Some Cabinet decisions result in the initiation and subsequent enactment of legislation; other decisions become legally binding through ratification by Executive Council or through powers vested in individual Ministers for the administration and control of their respective departments of government. In addition to government departments, statutory authorities also come under some degree of ministerial or parliamentary oversight.

**Premiers**

Since 1856 the following thirty-eight persons have held the office of Premier:

**Premiers of South Australia**

Name	Dates of Office	Total Period in Office	
		Years	Days
Hon. Boyle T. Finniss .....	24/10/1856- 21/8/1857	—	301
Hon. John Baker .....	21/8/1857- 1/9/1857	—	11
Hon. Robert R. Torrens .....	1/9/1857- 30/9/1857	—	29
Hon. Richard D. Hanson .....	30/9/1857- 9/5/1860	2	222

Premiers of South Australia (*continued*)

Name	Dates of Office	Total Period in Office	
		Years	Days
Hon. Thomas Reynolds .....	9/5/1860- 8/10/1861	1	152
Hon. G. M. Waterhouse .....	8/10/1861- 4/7/1863	1	269
Hon. Francis S. Dutton .....	4/7/1863- 15/7/1863; 22/3/1865- 20/9/1865	—	193
Hon. Sir Henry Ayers, KCMG .....	15/7/1863- 4/8/1864; 20/9/1865-23/10/1865; 3/5/1867- 24/9/1868; 13/10/1868- 3/11/1868; 22/1/1872- 22/7/1873	4	35
Hon. Arthur Blyth .....	4/8/1864- 22/3/1865; 10/11/1871- 22/1/1872; 22/7/1873- 3/6/1875	2	254
Hon. John Hart, CMG .....	23/10/1865- 28/3/1866; 24/9/1868-13/10/1868; 30/5/1870-10/11/1871	1	339
Hon. James P. Boucaut, QC .....	28/3/1866- 3/5/1867; 3/6/1875- 6/6/1876; 26/10/1877- 27/9/1878	3	11
Hon. H. B. Strangways .....	3/11/1868- 30/5/1870	1	208
Hon. John Colton .....	6/6/1876-26/10/1877; 16/6/1884- 16/6/1885;	2	142
Hon. William Morgan .....	27/9/1878- 24/6/1881	2	270
Hon. John C. Bray .....	24/6/1881- 16/6/1884	2	358
Hon. Sir J. W. Downer, KCMG, QC .....	16/6/1885- 11/6/1887; 15/10/1892- 16/6/1893	2	239
Hon. Thomas Playford .....	11/6/1887- 27/6/1889; 19/8/1890- 21/6/1892	3	323
Hon. J. A. Cockburn .....	27/6/1889- 19/8/1890	1	53
Hon. F. W. Holder .....	21/6/1892-15/10/1892; 8/12/1899- 15/5/1901	1	274
Rt Hon. C. C. Kingston, QC .....	16/6/1893- 1/12/1899	6	168
Hon. V. L. Solomon .....	1/12/1899- 8/12/1899	—	7
Hon. J. G. Jenkins .....	15/5/1901- 1/3/1905	3	290
Hon. Richard Butler .....	1/3/1905- 26/7/1905	—	147
Hon. Thomas Price .....	26/7/1905- 5/6/1909	3	314
Hon. A. H. Peake .....	5/6/1909- 3/6/1910; 17/2/1912- 3/4/1915; 14/7/1917- 8/4/1920	6	312
Hon. John Verran .....	3/6/1910- 17/2/1912	1	259
Hon. Crawford Vaughan .....	3/4/1915- 14/7/1917	2	102
Hon. Sir H. N. Barwell, KCMG .....	8/4/1920- 16/4/1924	4	8
Hon. John Gunn .....	16/4/1924- 28/8/1926	2	134
Hon. Lionel L. Hill .....	28/8/1926- 8/4/1927; 17/4/1930- 13/2/1933	3	160
Hon. R. L. Butler .....	8/4/1927- 17/4/1930; 18/4/1933- 5/11/1938	8	210
Hon. R. S. Richards .....	13/2/1933- 18/4/1933	—	64
Hon. Sir Thomas Playford, GCMG .....	5/11/1938- 10/3/1965	26	125
Hon. F. H. Walsh .....	10/3/1965- 1/6/1967	2	83
Hon. D. A. Dunstan, QC .....	1/6/1967- 17/4/1968; 2/6/1970- 15/2/1979	8	259

*Premiers of South Australia (continued)*

Name	Dates of Office	Total Period in Office	
		Years	Days
Hon. R. S. Hall .....	17/4/1968- 2/6/1970	2	47
Hon. J. D. Corcoran .....	15/2/1979- 18/9/1979	—	216
Hon. D. O. Tonkin .....	18/9/1979-		

**Ministry**

The Ministry is the sixty-fourth to hold office. The members at 18 September 1979 were:

*Premier, Treasurer, Minister of State Development and Minister of Ethnic Affairs*

Hon. David Oliver Tonkin, MP

*Deputy Premier and Minister of Mines and Energy*

Hon. Eric Roger Goldsworthy, MP

*Attorney-General and Minister for Corporate Affairs*

Hon. Kenneth Trevor Griffin, MLC

*Minister of Industrial Affairs and Minister of Public Works*

Hon. Dean Craig Brown, MP

*Minister of Education and Minister of Aboriginal Affairs*

Hon. Harold Allison, MP

*Chief Secretary, Minister of Fisheries and Minister of Marine*

Hon. William Allan Rodda, MP

*Minister of Local Government, Minister of Housing, Minister of Arts and Minister Assisting the Premier in Ethnic Affairs*

Hon. Charles Murray Hill, MLC

*Minister of Agriculture and Minister of Forests*

Hon. William Edwin Chapman, MP

*Minister of Environment and Minister of Planning*

Hon. David Charles Wotton, MP

*Minister of Transport and Minister of Recreation and Sport*

Hon. Michael Minell Wilson, MP

*Minister of Community Welfare and Minister of Consumer Affairs*

Hon. John Charles Burdett, MLC

*Minister of Health and Minister of Tourism*

Hon. Jennifer Lilian Adamson, MP

*Minister of Water Resources, Minister of Irrigation, Minister of Lands and Minister of Repatriation*

Hon. Peter Bruce Arnold, MP

**PARLIAMENT**

Parliament is summoned, prorogued, or dissolved, by proclamation issued by the Governor. The two Houses of Parliament are the Legislative Council (Upper House) and the House of Assembly (Lower House). The following table gives the dates and the number of House of Assembly sitting days for Parliamentary sessions in recent years.

Parliamentary Session	Period	House of Assembly Sitting Days
1973 .....	19/6/73-27/6/73	4
1973-74 .....	24/7/73-28/3/74	69
1974-75 .....	23/7/74-18/6/75	74
1975-76 .....	5/8/75-19/2/76	45
1976-77 .....	8/6/76-28/4/77	65
1977 .....	19/7/77-17/8/77	11
1977-78 .....	6/10/77-22/3/78	45
1978-79 .....	13/7/78-1/3/79	55
1979 .....	24/5/79-22/8/79	11
1979-80 .....	11/10/79-13/11/79	14

### Voting System

Members for both Houses are elected by secret ballot; the preferential system of voting is used. In filling the vacancy for each House of Assembly District the candidate who has received the largest number of first preference votes is elected if this number constitutes an absolute majority (*i.e.* greater than one-half of the total formal votes). If no candidate has received an absolute majority of first preference votes a second count is made in which the second preferences of the candidate who has received the fewest first preference votes are distributed. This distribution of second preferences of the successive candidate with the fewest votes is repeated until one candidate has received an absolute majority of votes.

For Legislative Council elections before 12 July 1975, the State was divided into five 4-member electoral districts with two members for each district retiring at each Legislative Council election. The first vacancy in each district was filled in the same manner as those in the single-member House of Assembly Districts discussed above. The second vacancy in each district was filled by re-arranging all ballot papers according to first preferences and allotting each ballot paper of the first elected candidate according to the second preferences. If a candidate then had an absolute majority he was elected, otherwise subsequent counts were made eliminating candidates with the fewest votes until one remaining candidate had received an absolute majority.

However, as a result of the passing of the Constitution and Electoral Acts Amendment Act, 1973, the number of electorates and the voting system has been changed for Legislative Council elections commencing with the election of 12 July 1975. This Act has increased the number of members of the Legislative Council from twenty to twenty-two and has introduced a system of proportional representation with the whole of the State as a single multi-member electoral district. Under the new system electors register preferences for groups of candidates rather than individuals (although a group may contain only one candidate) and a candidate's election depends on the proportion of votes his group obtains and his position within the group on the ballot paper. Because an optional preference voting system applies it is not necessary for electors to indicate preferences for each group in order to register formal votes.

### Members, Qualifications, and Privileges

Certain requirements must be met before a person qualifies for membership of the South Australian Parliament. The following persons are not eligible for membership of either House: Judges, persons under the age of eighteen, aliens, members of the Commonwealth Parliament, persons who are not residents of South Australia, holders of contracts for the Public Service, occupants of offices of profit under the Crown, persons of unsound mind, persons attainted of treason, undischarged bankrupts and insolvent persons, and, amongst others, persons under sentence for any offence punishable by

imprisonment for at least a year. Other requirements applicable only to one House or the other are mentioned on pages 73-4.

Each member is required to take an oath or make an affirmation of allegiance to the Crown before being permitted to sit or vote in Parliament. All members of the Parliament are entitled to such privileges, immunities, and powers as were held by members of the House of Commons on 24 October 1856, the date on which the Constitution Act came into force.

#### **Franchise**

The franchises for the separate Houses are shown on page 74. South Australia was the first, at the general election of 25 April 1896, of the Australian States to give voting rights to women, and the existence of this provision in this State contributed to the decision to include full adult franchise in proposals for Federation. For the first eighty-five years of responsible government voting for both Houses of Parliament was voluntary but the Electoral Act Amendment Act of 1942 made voting for the House of Assembly compulsory for persons whose names appear on the House of Assembly Electoral Roll.

#### **Number of Members and Electorates**

Alterations made to the number of members and number of electorates for each of the two Houses are shown in the following table:

**Members and Electorates, South Australia**

Date	Legislative Council		House of Assembly	
	Members	Electorates	Members	Electorates
1856 .....	18	1	36	17
1863 .....	18	1	36	18
1875 .....	18	1	46	22
1882 .....	24	4	46	22
1884 (a) .....	24	4	52	26
1890 .....	24	4	54	27
1902 .....	18	4	42	13
1912 (b) .....	18	4	40	12
1915 .....	20	5	46	19
1938 .....	20	5	39	39
1970 .....	20	5	47	47
1975 .....	21	1	47	47
1979 .....	22	1	47	47

(a) Separate representation for Northern Territory.

(b) Cession of Northern Territory to Commonwealth Government control.

#### **Functions of Parliament**

The function of Parliament is to legislate for the peace, order, and good government of the State. Principal among the tasks of Parliament is the raising of revenue and the appropriation of funds for the development and maintenance of the State through its public services.

Legislation may be initiated by any member in either House except that money Bills must be initiated by Ministers of the Crown in the House of Assembly; the Legislative Council may suggest amendments to money Bills although it may not effect such amendments itself. Most Bills are initiated by the Government as a result of the deliberations of Cabinet. The Opposition and Independent members usually confine their

activities to examination, criticism, and amendment, of Government measures. Legislation, other than to amend the Constitution, may be passed by a simple majority of the votes of the members present.

#### **Constitutional Amendment**

Alteration to the Constitution Act is in the hands of Parliament itself. An alteration to the Constitution requires at the second and third readings of the Bill acceptance by a majority of all the members (not only those present or voting) of each House voting separately.

#### **Deadlocks**

A deadlock results from the refusal by the Upper House to pass the same (or substantially the same) Bill during two consecutive Parliaments, provided that a general election for the Lower House has been held between the refusals and that on the second occasion an absolute majority of all the members of the Lower House voted in favour of the Bill at its second and third readings. In the event of a deadlock between the Houses, provision is made for the dissolution of both Houses.

#### **Life of Parliament**

Term of office of each Parliament is generally three years from the day on which it first meets for the dispatch of business but it may be prorogued or dissolved by the Governor before the expiration of this period.

Legislation introduced in 1933 extended the life of the twenty-eighth Parliament to five years and in 1937 the Constitution Act was amended for each subsequent Parliament to have a life of five years. However, the twenty-ninth Parliament repealed this provision and re-introduced three-year Parliaments.

#### **Salaries and Allowances**

Salaries and allowances for members of Parliament are determined periodically by the Parliamentary Salaries Tribunal, pursuant to the provisions of the Parliamentary Salaries and Allowances Act, 1965-1978.

The annual salary from 28 February 1979 is \$23 200 per member with allowances of between \$3 800 and \$14 000 depending on the area of the member's electorate and the distance from the City of Adelaide. The following additional payments are also made:

Premier and Treasurer—\$26 960 plus expense allowance of \$3 550.

Deputy Premier—\$18 940 plus expense allowance of \$2 950.

Leader of the Government in the Legislative Council—\$16 480 plus expense allowance of \$2 800.

Other Ministers—\$15 520 plus expense allowance of \$2 460.

President of Legislative Council and Speaker of House of Assembly—each \$13 000 plus expense allowance of \$1 400.

Chairman of Committees, House of Assembly—\$6 500 plus expense allowance of \$700.

Leader of the Opposition, House of Assembly—\$15 520 plus expense allowance of \$2 460.

Leader of the Opposition, Legislative Council—\$5 990 plus expense allowance of \$780.

Deputy Leader of the Opposition, House of Assembly—\$5 990 plus expense allowance of \$780.

Government Whip—\$4 000.

Opposition Whip—\$4 000.

In addition allowances are paid to the members of the various Parliamentary Committees.

### Cost of Parliamentary Government

The following table shows, in broad groups, the expenditure incurred in the operation of the parliamentary system in South Australia, comprising the Governor, the Ministry, the Legislative Council, House of Assembly and electoral activities.

**Cost of Parliamentary Government, South Australia**

Particulars	1975-76	1976-77	1977-78	1978-79
		\$'000		
Governor's Establishment .....	324	470	436	495
Ministry .....	407	457	480	565
Parliament:				
Legislative Council(a) .....	443	503	528	572
House of Assembly(a) .....	946	1 078	1 114	1 200
Other(b) .....	2 372	2 861	3 353	4 137
Total Parliament .....	3 761	4 442	4 995	5 909
Electoral .....	627	395	1 055	539
Royal Commissions, Select Committees, etc. ....	89	231	588	396
Total .....	5 207	5 995	7 554	7 904

(a) Allowances to members (including Ministers' salaries as members), travelling and other expenses.

(b) Government contribution to members' superannuation funds, printing, reporting staff, library, etc.

### Superannuation

All members are required to contribute to a Superannuation Fund established under the Parliamentary Superannuation Act, 1974, which provides for the payment of superannuation pensions to persons, or widows or widowers or eligible children of persons, who have served as members of the State Parliament. Members qualify for a pension after fifteen years service but can qualify for a pension after six years service if they retire involuntarily or are over sixty years of age.

Every member is required to contribute 11.5 per cent of his salary, including additional salary received as a Minister, officer of Parliament or member of a Parliamentary Committee. According to the length of service the pension payable to ordinary members varies between 41.2 per cent of basic salary (presently \$9 558 a year) and 75 per cent of basic salary (presently \$17 400 a year). Greater amounts of pension accrue to those members who have made additional contributions based on additional salary as a Minister or an office holder. Pensions are increased or decreased on 1 October each year in accordance with the increase or decrease in the Consumer Price Index for the preceding year ending 30 June.

At 30 June 1979 there were sixty-eight contributors to the fund; thirty ex-members, twenty-three widows and one child were in receipt of pensions.

### LEGISLATIVE COUNCIL

#### Members and Electorates

Before the passing of the Constitution and Electoral Acts Amendment Act, 1973 each member of the Legislative Council, in addition to fulfilling the general requirements mentioned on page 70, must have attained the age of thirty years, have been a British

subject, and have resided in the State for at least three years. For the purpose of electing members to the Council the State was divided into five electorates each having four members. Each electorate normally elected two members every three years, and each member occupied his seat for a minimum of six years. When a casual vacancy occurred because of the death, resignation or disqualification of a member, such a casual vacancy was filled, at a by-election in the particular electorate, for the unexpired portion of the previous member's term.

The Constitution and Electoral Acts Amendment Act, 1973, assented to on 22 November 1973, increased the number of members in the Legislative Council from twenty to twenty-two and reduced the number of electorates to one with the whole State becoming a single electorate with members elected on a proportional representation basis. This amendment did not become fully effective for two general elections as only half the Legislative Councillors retire at each election and eleven members (not ten as previously) are now elected at each general Legislative Council election. At the general election of 15 September 1979, eleven members were elected to the Legislative Council and at present there are twenty-two members in this House. In future casual vacancies will be filled by a person chosen at a joint sitting of the members of both the Legislative Council and House of Assembly.

#### **Franchise**

Voting for the Legislative Council is voluntary for those persons whose names are on the Legislative Council Electoral Roll. Under the Constitution and Electoral Acts Amendment Act, 1973, all names which appear on the House of Assembly Electoral Roll are included on the Legislative Council Electoral Roll. Thus, all electors entitled to vote at House of Assembly elections are entitled also to vote at Legislative Council elections. Qualifications for House of Assembly electors are discussed below.

#### **President and Chairman of Committees**

At the first meeting of the Council in each Parliament the members choose one from among their number to fill the position of President and Chairman of Committees. The person so elected is then entitled to a casting vote only.

### **HOUSE OF ASSEMBLY**

#### **Seat of Government**

The House of Assembly can be regarded as the more important Chamber in that the Government of the day holds its position as such only so long as it controls a majority in this House. When it no longer controls such a majority in vital issues, particularly 'money Bills', the Government must resign or go to the polls. Once defeated in the Lower House on a 'money Bill', the government is unable to finance the administration of the State.

#### **Franchise**

A British subject at least eighteen years of age who:

- (i) has lived continuously in Australia for at least six months, and in South Australia for at least three months, and in a Subdivision for at least one month immediately preceding the date of his or her claim for enrolment; or
- (ii) is or has been (as qualified by the Constitution Act) a member of the Commonwealth Naval, Military or Air Force, or a member of the Mercantile Marine, during any war in which the Commonwealth is or has been engaged;

is entitled to vote at an election for a Member of the House of Assembly if, at the time

of the election, he or she is enrolled on the Electoral Roll for a Subdivision of the Assembly District in which the election is held, and is not of unsound mind.

Persons convicted of an offence punishable with imprisonment for one year or more and persons attainted of treason are entitled to the same voting rights as ordinary citizens under the provisions of the Constitutional Act Amendment Act, 1976.

Enrolment for the House of Assembly is not compulsory but in practice, as a consequence of the operation of the Commonwealth and House of Assembly Joint Electoral Rolls, most persons enrolling for the Commonwealth Electoral Roll are also enrolled for the House of Assembly.

### **Membership**

Subject to the exclusions mentioned on page 70 election to the House of Assembly is open to those eligible to vote in an election for the House. Members of this House are elected for a maximum of three years, for single-member districts. The seat of a member becomes vacant through his death, resignation or disqualification and, usually, is filled at a by-election.

### **Electorates and Electoral Distribution**

The present allocation of thirty-three metropolitan and fourteen country electorates for the House of Assembly became operative from 23 August 1977 and was determined by the Electoral Districts Boundaries Commission. Before this date there were twenty-eight metropolitan and nineteen country House of Assembly electoral districts. The first election incorporating the present boundaries was held on 17 September 1977.

The Commission, constituted by the Constitution Act Amendment Act (No. 5), 1975, differs from previous commissions for redistribution of electoral boundaries in that each of those commissions was created by the Parliament to make a single report and recommendation to the Parliament. The boundaries so recommended did not become effective unless the recommendation was approved by the Parliament. However, the present Commission has perpetual succession and a common seal as a corporate entity. The reports made by the Commission do not require validating legislation and become operative three months after publication of the Commission's Order.

Under the Act any elector may, within one month of the Commission's Order, appeal to the Full Court of the Supreme Court.

### **Officers and their Functions**

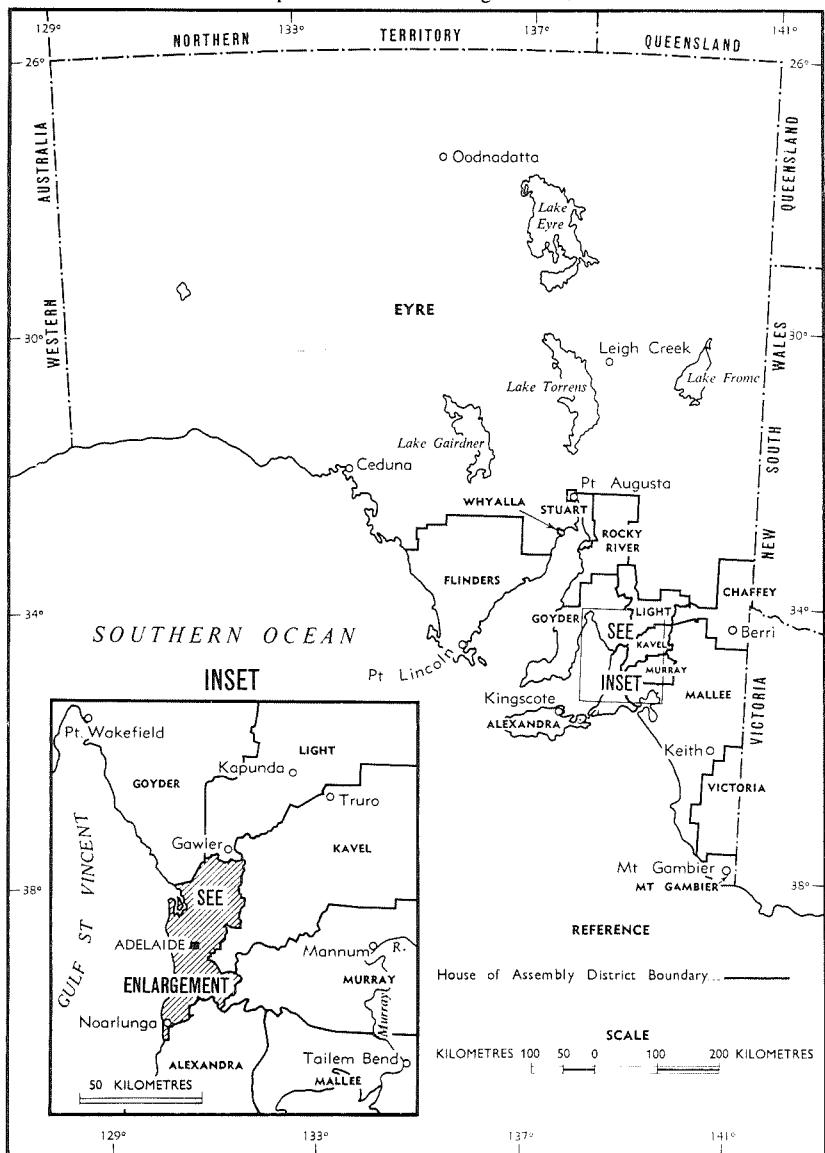
A Speaker presides over the House, and his election is the first business when a Parliament first meets. He presides over debate, maintains order, represents the House officially, communicates its wishes and resolutions, defends its privileges when necessary, and applies its procedure. The Speaker may exercise a casting vote only. There is also a Chairman of Committees elected by the House at the beginning of each Parliament; he presides over the deliberations of the House in Committee and acts as Deputy Speaker when required.

Other officers of the Parliament include the Leader and Deputy Leader of the Opposition in either House and the various party whips whose function is to ensure that their party members are present in the House for divisions and other important business.

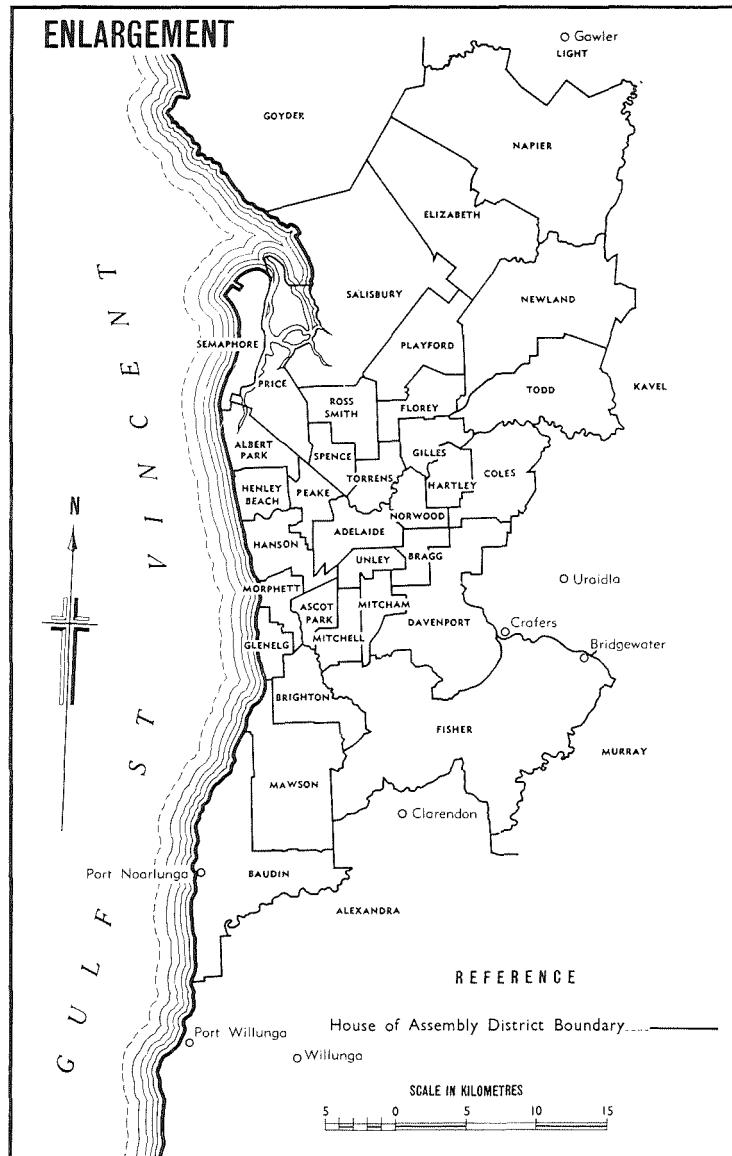
## **ELECTIONS AND PARTY REPRESENTATION**

The following table gives details of the numbers of electors on the Electoral Rolls and voting in contested electorates for all general elections from 1950 to 1979.

**SOUTH AUSTRALIA**  
**SOUTH AUSTRALIAN ELECTORAL DISTRICTS**  
 Operative from 23 August 1977



PORTION OF SOUTH AUSTRALIA  
SOUTH AUSTRALIAN ELECTORAL DISTRICTS  
Operative from 23 August 1977



**South Australian Parliament: Voting at Elections, 1950 to 1979**

Date	Legislative Council			House of Assembly		
	Contested Electorates			Contested Electorates		
	Electors Enrolled	Electors Voting	Per Cent	Electors Enrolled	Electors Voting	Per Cent
4 March 1950 .....	68 347	52 954	77.48	311 658	290 306	93.15
7 March 1953 .....	97 968	79 373	81.02	354 273	336 529	95.01
3 March 1956 .....	22 963	16 002	69.69	299 048	280 811	93.90
7 March 1959 .....	86 278	70 007	81.14	426 340	400 531	93.95
3 March 1962 .....	118 218	98 786	83.56	444 197	417 462	93.98
6 March 1965 .....	186 899	149 910	80.21	542 436	513 064	94.59
2 March 1968 .....	275 701	262 328	95.15	609 626	575 948	94.48
30 May 1970 .....				635 533	603 952	95.03
10 March 1973 .....	383 758	357 971	93.28	696 290	655 937	94.20
12 July 1975 .....	771 414	719 753	93.30	771 414	721 770	93.56
17 September 1977 .....				818 335	764 072	93.37
15 September 1979 .....	826 586	765 033	92.66	826 586	768 985	93.03

The following table shows the Party representation in both Houses of the South Australian Parliament resulting from each general election from 1950.

**South Australian Parliament: Party Representation at Elections, 1950 to 1979**

Date	Legislative Council			House of Assembly		
	ALP	LP	Other	ALP	LP	Other
4 March 1950 .....	4	16	—	12	23	4
7 March 1953 .....	4	16	—	14	21	4
3 March 1956 .....	4	16	—	15	21	3
7 March 1959 .....	4	16	—	17	20	2
3 March 1962 .....	4	16	—	19	18	2
6 March 1965 .....	4	16	—	21	17	1
2 March 1968 .....	4	16	—	19	19	1
30 May 1970 .....	4	16	—	27	20	—
10 March 1973 .....	6	13	1	26	18	3
12 July 1975 .....	10	9	2	23	20	4
17 September 1977 .....	10	11	—	27	18	2
15 September 1979 .....	10	11	(a) 1	19	25	(b) 3

(a) Australian Democrats. (b) 1 Australian Democrats, 1 National Country Party, 1 Independent.  
ALP Australian Labor Party LP Liberal Party of Australia

At the general election held on 15 September 1979 there were forty-seven electorates represented in the House of Assembly, thirty-three metropolitan and fourteen country. The table below shows the electoral returns for that general election.

**House of Assembly: Party Representation, 1979**

Electorate	Electors on Roll	Electors Voting	Successful Candidate		
			Name	First Party	Preference Votes
<b>Metropolitan:</b>					
Adelaide .....	16 288	14 613	Wright, J. D.	ALP	7 436
Albert Park .....	18 112	16 915	Hamilton, K. C.	ALP	7 901

House of Assembly: Party Representation, 1979 (*continued*)

Electorate	Electors on Roll	Electors Voting	Successful Candidate		
			Name	Party	First Preference Votes
<b>Metropolitan: (<i>continued</i>)</b>					
Ascot Park .....	16 432	15 387	Trainer, J. P.	ALP	7 066
Baudin .....	21 097	19 490	Hopgood, D. J.	ALP	8 918
Bragg .....	16 716	15 355	Tonkin, Hon. D. O.	LP	9 771
Brighton .....	18 654	17 434	Glazbrook, R. E.	LP	8 195
Coles .....	18 416	17 148	Adamson, Hon. J. L.	LP	9 502
Davenport .....	17 983	16 659	Brown, Hon. D. C.	LP	12 253
Elizabeth .....	18 583	17 126	Duncan, P.	ALP	8 809
Fisher .....	20 670	19 484	Evans, S. G.	LP	11 886
Florey .....	17 770	16 552	O'Neill, H. H.	ALP	7 679
Gilles .....	17 499	16 376	Slater, J. W.	ALP	7 489
Glenelg .....	17 058	15 697	Mathwin, J.	LP	9 527
Hanson .....	17 377	16 147	Becker, H.	LP	9 459
Hartley .....	18 504	17 278	Corcoran, J. D.	ALP	8 253
Henley Beach ....	18 417	17 217	Randall, R. J.	LP	7 244
Mawson .....	21 470	20 334	Schmidt, I.	LP	9 225
Mitcham .....	16 794	15 699	Millhouse, R. R.	AD	6 947
Mitchell .....	17 077	15 930	Payne, R. G.	ALP	7 624
Morphett .....	16 968	15 891	Oswald, J. K. G.	LP	7 959
Napier .....	17 748	16 145	Hemmings, T. H.	ALP	7 940
Newland .....	21 401	20 078	Billard, B.	LP	9 661
Norwood .....	16 670	15 335	Webster, F. R. (a)	LP	6 899
Peake .....	16 493	15 367	Plunkett, K. H.	ALP	8 319
Playford .....	18 340	17 217	McRae, T. M.	ALP	7 524
Price .....	15 885	14 741	Whitten, G. T.	ALP	7 694
Ross Smith .....	16 031	14 883	Bannon, J. C.	ALP	8 997
Salisbury .....	20 557	19 172	Arnold, L. M. F.	ALP	10 840
Semaphore .....	18 029	17 056	Peterson, N. T.	IND	5 106
Spence .....	15 578	14 461	Abbott, R. K.	ALP	9 502
Todd .....	18 850	17 719	Ashenden, E. S.	LP	8 478
Torrens .....	16 684	15 160	Wilson, Hon. M. M.	LP	8 186
Unley .....	15 892	14 313	Langley, G. R. A.	ALP	6 424
<b>Country:</b>					
Alexandra .....	18 402	17 179	Chapman, Hon. W. E.	LP	11 584
Chaffey .....	18 074	17 049	Arnold, Hon. P. B.	LP	9 970
Eyre .....	15 317	13 644	Gunn, G. McD.	LP	7 856
Flinders .....	15 932	14 951	Blacker, P. D.	NCP	7 833
Goyder .....	16 893	15 888	Russack, E. K.	LP	11 772
Kavel .....	17 923	16 814	Goldsworthy, Hon. E. R.	LP	11 248
Light .....	16 257	15 323	Eastick, Hon. B. C.	LP	9 412
Mallee .....	15 552	14 552	Lewis, I. P.	LP	6 488
Mount Gambier .	17 699	16 597	Allison, Hon. H.	LP	8 983
Murray .....	18 017	16 851	Wotton, Hon. D. C.	LP	10 180
Rocky River .....	17 071	16 125	Olsen, J. W.	LP	7 669
Stuart .....	17 038	16 050	Keneally, G. F.	ALP	10 236
Victoria .....	15 564	14 523	Rodd, Hon. W. A.	LP	9 476
Whyalla .....	16 602	15 240	Brown, M. J.	ALP	9 173

(a) Following the decision by the Court of Disputed Returns that the election for the seat of Norwood was void, a by-election was held on 16 February 1980. The successful candidate was Mr G. J. Crafer.

ALP Australian Labor Party    NCP National Country Party    AD Australian Democrats  
 LP Liberal Party of Australia    IND Independent

*Speaker* : The Hon. B. C. Eastick, MP

*Chairman of Committees* : G. M. Gunn, MP

*Leader of the Opposition* : J. C. Bannon, MP

*Deputy Leader of the Opposition* : J. D. Wright, MP

*Government Whip* : S. G. Evans, MP

*Opposition Whip* : D. J. Hopgood, MP

*Acting Clerk of the House of Assembly* : G. D. Mitchell

The members of the Legislative Council after the general election of 15 September 1979 were as follows:

Blevins, Hon. F. T. (ALP)	Dunford, Hon. J. E. (ALP)
Bruce, Hon. G. L. (ALP)	Foster, Hon. N. K. (ALP)
Burdett, Hon. J. C. (LP)	Griffin, Hon. K. T. (LP)
Cameron, Hon. M. B. (LP)	Hill, Hon. C. M. (LP)
Carnie, Hon. J. A. (LP)	Laidlaw, Hon. D. H. (LP)
Chatterton, Hon. B. A. (ALP)	Levy, Hon. J. A. W. (ALP)
Cornwall, Hon. J. R. (ALP)	Milne, Hon. K. L. (AD)
Creedon, Hon. C. W. (ALP)	Ritson, Hon. R. J. (LP)
Davis, Hon. L. H. (LP)	Sumner, Hon. C. J. (ALP)
Dawkins, Hon. M. B. (LP)	Whyte, Hon. A. M. (LP)
DeGaris, Hon. R. C. (LP)	Wiese, Hon. B. J. (ALP)

*President and Chairman of Committees* : Hon. A. M. Whyte, MLC

*Leader of the Opposition* : Hon. C. J. Sumner, MLC

*Clerk of the Legislative Council* : J. W. Hull

#### Court of Disputed Returns

In South Australia, provision is made in the Electoral Act, 1929-1976, for the constitution of a Court of Disputed Returns which has jurisdiction to hear and determine all questions of disputed returns affecting either House of the State Parliament which are referred to it by the House concerned. No return on an election writ may be disputed, except by a petition to this Court. A subsidiary function of the Court is to hear petitions for exoneration from liability for failure to file certain electoral returns or vouchers under Part XIV of the Electoral Act.

The Court is constituted by the senior puisne Judge of the Supreme Court, or where he is not available by the puisne Judge next in order of seniority who is available.

The Court sits as an open court, usually at Parliament House, Adelaide, and has power, *inter alia* :

- (a) to compel the attendance of witnesses and the production of documents;
- (b) to examine witnesses upon oath;
- (c) subject to any Supreme Court rules, to regulate the form and mode of its own proceedings;
- (d) to declare that any person who was returned as elected was not duly elected;
- (e) to declare any candidate duly elected who was not returned as elected;
- (f) to declare any election void;
- (g) to dismiss or uphold any petition in whole or in part;
- (h) to award any costs; and
- (i) to punish any contempt of its authority.

Most cases have related to House of Assembly elections. Since 1857, the Court of Disputed Returns has considered twenty-two petitions referred to it by the House of Assembly concerning the election of twenty-seven members of that House. The Court's decisions in these cases are summarised hereunder:

Election voided and member unseated .....	16
Member unseated but other candidate declared to be duly elected .....	2
Petitions unsuccessful .....	2
Petitions dismissed .....	6
Petition withdrawn .....	1

### REFERENDA

Since the inception of responsible government in South Australia in 1856 seven referenda have been held—the first in 1896 and subsequent ones in 1898, 1899, 1911, 1915, 1965 and 1970—and ten proposals have been submitted.

Three proposals related to education (1896) of which only one was approved; three were constitutional (1898 and 1899)—all approved; one related to Parliamentary salaries (1911)—not approved; one related to bar-room closing hours (1915)—favoured 6 p.m. closing; one related to the establishment of a lottery (1965)—approved; and one related to extended shopping hours in the metropolitan area (1970)—not approved.

The last referendum, held on 19 September 1970, asked House of Assembly electors in the Adelaide Metropolitan Planning Area and the Municipality of Gawler 'Are you in favour of shops in the Metropolitan Planning Area and the Municipality of Gawler being permitted to remain open for trading until 9 p.m. on Fridays?' Of the 463 629 electors qualified to vote 177 296 voted 'Yes' and 190 826 voted 'No'.

### ADMINISTRATION

The South Australian Public Service consists of thirty-four departments. In the following list, the departments have been grouped according to Ministerial control.

#### PREMIER, TREASURER, MINISTER OF STATE DEVELOPMENT AND MINISTER OF ETHNIC AFFAIRS

Hon. David Oliver Tonkin, MP

Premier's Department	Department of the Public Service
Treasury Department	Board

#### DEPUTY PREMIER AND MINISTER OF MINES AND ENERGY

Hon. Eric Roger Goldsworthy, MP

Department of Services and Supply	Department of Mines and Energy
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#### ATTORNEY-GENERAL AND MINISTER OF CORPORATE AFFAIRS

Hon. Kenneth Trevor Griffin, MLC

Law Department	Department of the Corporate
Supreme Court Department	Affairs Commission
Electoral Department	

#### MINISTER OF INDUSTRIAL AFFAIRS AND MINISTER OF PUBLIC WORKS

Hon. Dean Craig Brown, MP

Department of Industrial Affairs and Employment	Department of Trade and Industry Public Buildings Department
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**MINISTER OF EDUCATION AND MINISTER OF ABORIGINAL AFFAIRS**

Hon. Harold Allison, MP

Education Department

Department of Further Education

**CHIEF SECRETARY, MINISTER OF FISHERIES AND MINISTER OF MARINE**

Hon. William Allan Rodda, MP

Police Department

Department of Fisheries

Department of Correctional Services

Department of Marine

Auditor-General's Department

**MINISTER OF LOCAL GOVERNMENT, MINISTER OF HOUSING, MINISTER OF ARTS AND MINISTER ASSISTING THE PREMIER IN ETHNIC AFFAIRS**

Hon. Charles Murray Hill, MLC

Department of Local Government

Art Gallery Department

Department for the Arts

**MINISTER OF AGRICULTURE AND MINISTER OF FORESTS**

Hon. William Edwin Chapman, MP

Department of Agriculture

Department of Woods and Forests

**MINISTER OF ENVIRONMENT AND MINISTER OF PLANNING**

Hon. David Charles Wotton, MP

Department of Urban and Regional Affairs

Department for the Environment

**MINISTER OF TRANSPORT AND MINISTER OF RECREATION AND SPORT**

Hon. Michael Minell Wilson, MP

Highways Department

Department of Transport

**MINISTER OF COMMUNITY WELFARE AND MINISTER OF CONSUMER AFFAIRS**

Hon. John Charles Burdett, MP

Department of Public and Consumer Affairs

Department for Community Welfare

**MINISTER OF HEALTH AND MINISTER OF TOURISM**

Hon. Jennifer Lilian Adamson, MP

Hospitals Department

Department of Tourism

**MINISTER OF WATER RESOURCES, MINISTER OF IRRIGATION, MINISTER OF LANDS AND MINISTER OF REPATRIATION**

Hon. Peter Bruce Arnold, MP

Engineering and Water Supply Department

Department of Lands

### SUPREME COURT JUDGES

Judges of the Supreme Court are appointed by commission of the Governor on the advice of the Executive Council. A person may not be appointed a judge of the Supreme Court unless he is a legal practitioner of ten years standing. Judges of the Supreme Court at 28 March 1980 were:

Hon. Leonard James King (Chief Justice)	Hon. James Michael White
Hon. Roma Flinders Mitchell, CBE	Hon. Christopher John Legoe
Hon. George Henry Walters	Hon. Brian Rothwell Cox
Hon. Howard Edgar Zelling, CBE	Hon. Robert Finey Mohr
Hon. William Andrew Noye Wells	Hon. Roderick Grant Matheson
Hon. Alexander Keith Sangster	Hon. Donald Carter Williams
Hon. Samuel Joshua Jacobs	

### THE OMBUDSMAN

The office of the Ombudsman is established under the Ombudsman Act, 1972-1974. The Ombudsman is empowered to investigate complaints from members of the public concerning the administrative acts of State Government departments, State statutory authorities and local government councils.

The jurisdiction of the Ombudsman does not extend to Commonwealth Government departments or authorities, judicial decisions, police actions, or actions by private individuals or companies.

A complaint to the Ombudsman is usually made by the person or enterprise directly affected by an administrative act, although, a Member of the South Australian Parliament or some other person may act on his behalf. Complaints may be made by telephone or personal visit, but it is preferable for a complaint to be in writing giving full details including copies of any correspondence with the authority concerned.

The Ombudsman has the powers of a royal commission but conducts his investigations in private. Complainants are informed of the final result of any inquiry and where appropriate progress reports are given while an investigation is proceeding. The Ombudsman service is provided free-of-charge.

During 1978-79, 1 009 complaints were registered and of those fully investigated, approximately 26 per cent were found to be justified fully or in part.

### LEGISLATION

During 1979, 72 Public Acts were passed by the South Australian Parliament. Details of some of the more important legislation passed during this period are given below.

Aboriginal Heritage Act, 1979 (No. 46). An Act to provide for the protection and preservation of sites and items of sacred, ceremonial and historical significance to Aboriginal people; to repeal the Aboriginal and Historic Relics Preservation Act, 1965.

Appeal Costs Fund Act, 1979 (No. 33). An Act to establish a fund to indemnify parties to appeals, or proceedings in the nature of an appeal, who have suffered loss by reason of an error of law on the part of a court or tribunal.

Children's Protection and Young Offenders Act, 1979 (No. 44). An Act to provide for the protection, care and rehabilitation of children; to repeal the Juvenile Courts Act, 1971-1975.

Chiropractors Act, 1979 (No. 19). An Act to establish a Registration Board to register chiropractors and regulate the practice of chiropractic; repeals the Chiropractic Act, 1949.

Dog Control Act, 1979 (No. 48). An Act to provide for the registration of dogs and for the control and regulation of the keeping of dogs; to repeal the Registration of Dogs Act, 1924-1975.

Door to Door Sales Act Amendment Act, 1979 (No. 41) amended the Door to Door Sales Act, 1971 in regard to the sale of books and goods together with an amended definition of 'cooling off period'.

Gift Duty Act Amendment Act, 1979 (No. 63) amended the Gift Duty Act, 1968-1976 to exempt from gift duty all gifts made on or after 1 January 1980.

Pay-roll Tax Act Amendment Act, 1979 (No. 64) amended the Pay-roll Tax Act 1971-1978 to reduce pay-roll tax to employers who expand employment opportunities.

Prevention of Pollution of Waters by Oil Act Amendment Act, 1979 (No. 24) amended the Prevention of Pollution of Waters by Oil Act, 1961-1975 to extend the existing provisions to apply to discharges from oil rigs, refineries, pipelines or vehicles.

Road Maintenance (Contribution) Act Amendment Act, 1979 (No. 26) amended Road Maintenance (Contribution) Act, 1963-1975 to remove the liability to pay road maintenance charges by long distance hauliers.

Santos (Regulation of Shareholdings) Act, 1979 (No. 55). An Act to limit the shareholding to fifteen per cent of any one shareholder or group of shareholders.

Stamp Duties Act Amendment Act, 1979 (No. 66) amended the Stamp Duties Act, 1923-1978 to reduce the stamp duties payable on acquiring a new house.

Succession Duties Act Amendment Act, 1979 (No. 67) amended the Succession Duties Act, 1929-1977 to exempt completely from succession duty the estates of persons who died on or after 1 January 1980.

Tertiary Education Authority Act, 1979 (No. 14). An Act to promote, develop and co-ordinate post-secondary education in South Australia; to establish the Tertiary Education Authority of South Australia; to repeal the South Australian Board of Advanced Education Act, 1972.

### OVERSEAS REPRESENTATION

South Australia is represented in London by the Agent-General for South Australia, at South Australia House, 50 Strand, London. As official representative of the State, it is the function of the Agent-General to work in close co-operation with the High Commissioner for Australia, to keep the State Government informed of political and economic developments overseas, to promote industrial development and investment in South Australia, to encourage immigration to the State and to foster trade with the United Kingdom and other countries. The present Agent-General and Trade Commissioner is Mr W. M. Scriven.

### INTERSTATE REPRESENTATION

The South Australian Tourist Bureau maintains offices at 402 George Street, Sydney, NSW, and at 25 Elizabeth Street, Melbourne, Victoria, to foster and facilitate tourist travel to South Australia.

### CONSULAR REPRESENTATIVES

There are 24 countries represented in South Australia by consuls, vice-consuls, consular-agents or consul-generals.

*Austria:* John A. Nelson, Consul-General

Dr Peter E. Steidl, Vice-Consul

*Belgium:* Sir Robert E. Porter, Consul (a)



there is a wide variation in the degree of autonomy accorded, in various aspects, to different authorities.

Activities carried out by public corporations include tertiary education, hospital services, power supply, public transport, banking services, fire control, irrigation and drainage in rural areas, control and regulation of milk supply, slaughtering of animals for human consumption, housing development, off-course totalisators and lotteries, and investigation of problems relating to the development of mineral resources.

In appropriate parts of this Year Book reference is made to the activities of most of the public corporations which operate in South Australia.

### 3.5 LOCAL GOVERNMENT

#### LOCAL GOVERNMENT AUTHORITIES

##### Local Government Areas: Number, Size and Status

At 1 January 1980 there were 129 local government areas in South Australia including the site of Monarto which was constituted as a municipality under the Monarto Development Commission Act, 1973 with the Commission as the corporation and council of the municipality. Each local government area, with the exception of Monarto, is controlled by a council consisting of members elected by local ratepayers and exercising powers under the Local Government Act, 1934-1979.

The total area incorporated in local government areas at 1 January 1980 was 151 524 square kilometres; this is only slightly above 15 per cent of the total area of the State but contains almost 99 per cent of the State population.

There are two major types of local government areas—district council areas and municipalities. Usually district council areas consist predominantly of rural land and contain one or more towns. Generally, to qualify for proclamation as a municipality an area must be used predominantly for either residential, business, industrial, or manufacturing purposes (or a combination of these purposes), and be able to support itself financially. Some municipalities are constituted as cities, the qualification being 15 000 inhabitants for metropolitan municipalities (the twenty-one local government areas which form the metropolitan area as defined under the Local Government Act and which, before June 1966, corresponded to the statistical Urban Adelaide) and 10 000 persons in other areas.

Of the 129 local government areas at 1 January 1980, 37 were municipalities (including 25 cities) and 92 were district council areas.

The Governor may create, abolish, or vary the size, status, or organisation of, any local government area or portion thereof, provided certain requirements are satisfied. Such alterations usually stem from petitions by electors or a council.

As a result of legislation passed in 1969 district councils may apply to the Governor for mayoral status; in previous years only municipal councils had mayors. Since the legislation eighteen district councils, Berri, Clare, Gumeracha, Kadina, Kanyaka-Quorn, Kapunda, Karoonda-East Murray, Kingscote, Loxton, Meadows, Millicent, Murat Bay, Murray Bridge, Penola, Strathalbyn, Victor Harbor, Waikerie and Willunga have been granted mayoral status.

##### Functions of Local Government

The Local Government Act, 1934-1979 prescribes most of the 'powers and authorities' which each council shall or may exercise 'for the good government' and 'the management of the affairs' of its area, but some functions devolve from other Acts. To enable it to sue and be sued and to participate in transactions involving the purchase and sale of land and other property each council is constituted as a corporate body.

The functions performed by councils vary somewhat with the area concerned, but there are general functions which are common to them all. Many of these functions receive more detailed attention in the parts of this book dealing with the appropriate subjects, e.g. road construction and maintenance in Part 8.3, Roads; health services and Local Boards of Health in Part 6.5, Health; and libraries in Part 6.4, Culture and Recreation. Among the many other functions of local government authorities are the provision of street lighting, the licensing and inspection of slaughterhouses, the maintenance of cemeteries, the maintenance of foreshores and jetties, the control of the location of industries (especially noisy trades), the prevention of fires within certain areas, and the policing of provisions relating to vermin and weeds.

### **Organisation and Representation**

Whereas a municipality must be divided into at least two areas known as wards, a district council need not have wards; however, only four district councils have undivided areas. No council may comprise less than five members, and each ward in a municipality must be represented by two councillors. No district council area may be divided into more than ten wards, and the number of councillors for each ward is established by proclamation.

A candidate for election as a councillor must be an adult elector for the area for which he seeks election. Special magistrates, undischarged bankrupts, persons holding contracts or employment under the council, persons under sentence for crimes, and persons of unsound mind are ineligible for election.

Each year half the number of councillors retire. In councils with wards one councillor from each ward, the one who has been 'the longest in office without re-election', retires; in other councils the councillors who did not retire one year do so the next. In all cases a retiring councillor is eligible for re-election.

Any municipality may apply to add no less than three and no more than six aldermen to its council. The qualifications for councillors apply to aldermen, except that aldermen are not bound by the limits of wards, and an alderman must have served at least one year as a member of the council. Although the functions of aldermen are not specifically defined the concept is that they should impartially consider the interests of the area as a whole and so resolve any conflict which may arise between sectional interests represented by councillors.

Mayors of municipalities and of certain district councils are elected annually on the same basis as aldermen. The chairman of a district council is chosen annually by councillors from among their number.

### **Allowances**

Council members, other than mayor or chairman, are not paid salaries or allowances, but may be reimbursed any expenses incurred in the performance of council business, and in the case of district councils, may be reimbursed the cost of travelling to and from council meetings.

The mayor or chairman receives an annual allowance which is determined at a council meeting in July of each year. This allowance, payable in advance, is to compensate for any expenses he is likely to incur in the execution of his official duty in the current financial year.

### **Franchise**

Under the provisions of the Local Government Act, 1934-1979 universal adult franchise applied in local government elections and polls from 2 July 1977. A person is entitled to enrol as an elector if he is resident in a local government authority area, or if

he is a ratepayer in respect of ratable property within the area. A body corporate is enrolled under the name of a nominated agent. Recent changes to the Act now provide the right of non-naturalised residents to be enrolled.

#### Officers and their Functions

Each council may appoint any officers it considers necessary to carry out its duties, including constables to facilitate the maintenance of law and order within its area. Each council must appoint a town clerk (in a municipality) or a district clerk (in a district council) as the chief executive officer, and an auditor.

Employment in local government administration is now regarded as a career and councils now require a great range of skilled employment including community development officers, accountants, planning officers, social workers and data processing personnel. Most town and district clerks are full-time employees, and councils are required to employ in those positions only those persons who have passed examinations qualifying them for the work. The characteristics of particular areas determine to some extent the nature of the duties performed by town and district clerks; they often undertake a very wide variety of functions, especially in smaller areas, where even the part-time employment of specialist officers for particular tasks is not warranted. Continuity of service between councils for long service leave and other purposes is provided for in the Local Government Act. The Minister of Local Government sets a minimum standard of superannuation benefits which must be made available to council employees. Other officers employed in local government are required to hold appropriate qualifications; these include engineers, overseer's, building surveyors and inspectors, health surveyors and authorised weed officers.

The auditor for each council is appointed for a term of two years. He is not eligible for appointment unless he holds a Local Government Auditor's Certificate of competence issued by the Local Government Auditors Examining Committee.

Whenever a council itself undertakes a new assessment of property values within its area it is required under the Local Government Act to appoint a valuer who recommends to the council a valuation of each property for rating purposes. A ratepayer may appeal against a council's valuation of his own property or that of another ratepayer. Instead of undertaking its own assessment of property values it is now not uncommon for a council to adopt the valuations of the Valuer-General. When this is done a council avoids the necessity of employing a valuer but a fee for each valuation is payable to the Valuer-General. There is no right of appeal to the council against valuations so based; in respect of the Government valuation the right of appeal lies against the Valuer-General when the valuation is made.

#### Finance

Local government authorities derive their revenue from many different sources, including sundry licences and fines, but the principal sources are rates, loans raised against the security of future rates, and government grants. The relative importance of these sources of revenue varies between areas and through time, within areas.

Specific purpose Commonwealth Government grants, generally, are not made direct to local government authorities but are administered by appropriate State Government departments. The most important example of this is the distribution of portion of Commonwealth Aid Roads Grant to local government authorities by the Highways Department in conjunction with the State Treasury.

The Commonwealth Government makes available to the States for sharing by local government authorities an agreed percentage of income tax collected by the Commonwealth. The basis on which the States make the funds available to local government

authorities must be agreed to by the Commonwealth Government and must include an approved distribution on a *per capita* basis with the balance distributed on an equalisation basis. South Australia is making 30 per cent of the State amount available to local government authorities on a *per capita* basis.

The State Government provides funds and subsidies to local government for a wide range of functions including public libraries, recreation centres and facilities, public parks, caravan parks, effluent and stormwater drainage, and roads.

A large proportion of local government expenditure from both loan funds and other revenue is for the construction and maintenance of roads, footpaths, and stormwater drains. Further information is contained in Part 11.5, Local Government Finance.

#### **South Australian Local Government Grants Commission**

This body was established in 1976 under the provisions of the South Australian Local Government Grants Commission Act, 1976.

It's main function is to recommend to the Minister the councils to which grants should be made and the amount of such grants. It has, for the purpose of its inquiries, the powers of a commission appointed under the Royal Commissions Act, 1917.

The Commission is required to ensure that all funds provided are distributed each year and that as far as possible, any grant to a council will be sufficient to enable the council to function at a standard not appreciably below similar councils. The grants recommended by the Commission are required to be free from any direction as to specific use.

The recommendations of the Commission must be forwarded to the Minister who may refer them back requesting further consideration. The Commission is required to reconsider its recommendation in the light of the request and following this the Minister, even though no amendments are made to original recommendations, must approve of those recommendations.

#### **Local Government Advisory Commission**

The Local Government Advisory Commission was established by Act of Parliament in 1976. The Commission comprises a Chairman who must be a person holding judicial office, one member being a public servant nominated by the Minister and another member appointed by the Governor.

The Commission is required to investigate and make recommendations on voluntary amalgamations of councils submitted to it and to advise the Minister on any matter relating to any petition or counter petitions referred to it for investigation.

The Commission has the powers of a royal commission.

#### **Outback Areas Community Development Trust**

The Outback Areas Community Development Trust Act, 1978 established the Outback Areas Community Development Trust to make funds available to improve community facilities in the isolated centres of the outback unincorporated areas of the State. The Trust is empowered to borrow \$1 million, and works closely with local community and progress associations in the determination of needs and priorities for funding.

### **3.6 TOWN AND REGIONAL PLANNING**

#### **Legislation**

In 1920 the South Australian Parliament passed the Town Planning and Development Act which followed the Control of Subdivision of Land Act of 1917. These Acts were the first of their kind in Australia. The Act of 1920 made provision for the preparation of town planning schemes and by-laws, for the appointment of a Government Town

Planner and a Town Planning Department. The Department prepared plans for various areas, including Colonel Light Gardens and the townships of Iron Knob and Barmera. The Acts of 1917 and 1920 were repealed by the Town Planning Act, 1929 which dealt only with the control of land subdivision.

The Town Planning Act, 1929 was amended in 1955 to provide for a Town Planning Committee which was required to prepare a plan to guide the future development of the metropolitan area of Adelaide. The Committee considered the probable future population of the metropolitan area, the provision of public transport, adequacy of highways, provision of open spaces such as parks and sports grounds, the zoning of industrial districts and the subdivision of land in relation to the economic provision of sewerage, water supply, electricity and gas services.

The Metropolitan Development Plan, together with its accompanying Report on the Metropolitan Area of Adelaide, was laid before both Houses of Parliament in October 1962, and an amendment to the Town Planning Act followed in 1963. The amendment required the Committee to call for and consider objections to the Plan as submitted to Parliament and the Committee was authorised to make regulations to implement the Plan.

The Planning and Development Act, which came into operation in 1967, repealed the Town Planning Act. It established an eleven-member State Planning Authority (with the Director of Planning as Chairman) and an independent Planning Appeal Board of four members. Provisions were made for the Planning Authority to implement and review the 1962 Development Plan, to prepare similar plans for other parts of the State and in conjunction with local government authorities to determine broad policies to guide the growth of towns and cities throughout the State.

The Planning and Development Act Amendment Act, 1971 reconstituted the State Planning Authority to include a wider representation of experts in the fields of local government, conservation and aesthetics. Further amendments in 1972, 1973, 1975, 1976, and 1978 provided for the appointment of permanent commissioners to the Planning Appeal Board, made provision for objector appeals, enabled the State Planning Authority to acquire and develop land within the Port Adelaide District Business Zone, prohibited subdivision of land within the Hills Face Zone, brought all land under subdivision control and made large shopping centres in residential areas subject to Ministerial control until 31 December 1979.

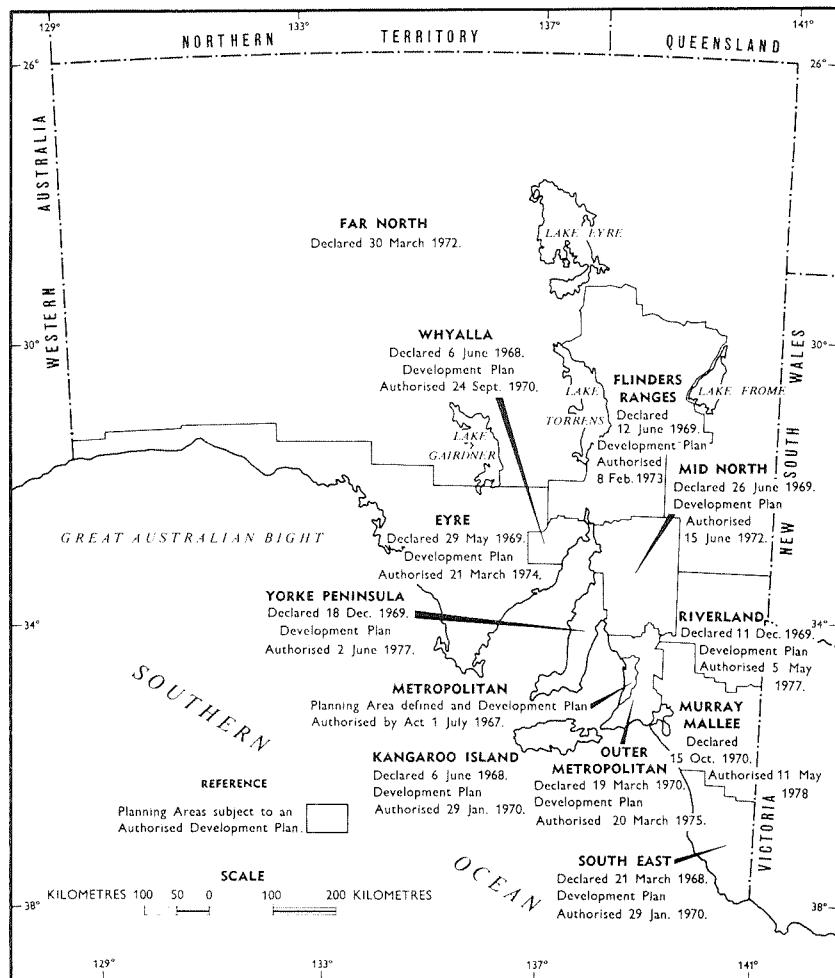
Development in the City of Adelaide is now controlled under the City of Adelaide Development Control Act, 1976. Authorities under the Act are the Corporation of the City of Adelaide, the City of Adelaide Planning Commission and the City of Adelaide Planning Appeals Tribunal.

### **Development Plans**

Twelve planning areas have been declared covering the whole of the State. Development plans have been authorised for eleven of these areas, namely, Metropolitan (1 July 1967), South East (29 January 1970), Kangaroo Island (29 January 1970), Whyalla (24 September 1970), Mid North (15 June 1972), Flinders Ranges (8 February 1973), Eyre (21 March 1974), Outer Metropolitan (20 March 1975), Riverland (5 May 1977), Yorke Peninsula (2 June 1977) and Murray Mallee (11 May 1978). Work on preparing a development plan for the remaining area of the State is progressing. In some parts of the State, such as in the Metropolitan area and Whyalla, the planning emphasis is on controlling development, whereas in the Flinders Ranges and Kangaroo Island, conservation of the natural resources and beauty of the area is being stressed.

The process of preparing a development plan involves a considerable amount of public

## SOUTH AUSTRALIA PLANNING AREAS



participation. Local councils, government departments and interested groups and individuals are consulted during the preparation of the plan, and the general public is given the opportunity to comment on it during a two month public exhibition period. Following the receipt of any representations, the State Planning Authority submits the development plan to the Minister in its original or amended form. The Minister in turn forwards the plan to the Governor with his recommendation for action.

The Governor may decide to authorise the plan, reject it, amend it, on the basis of the representations received or send it back to the Authority for further consideration. Although rather a lengthy process, it does mean that the public has an opportunity to participate in the future development and conservation of the State.

Where existing development plans need to be updated or revised, a similar process is put in motion for the preparation of a supplementary development plan. In Metropolitan Adelaide supplementary development plans have been prepared and authorised for the alignment of a number of major transportation routes (authorised 4 November 1971), the re-development of 5.5 hectares of land of Hackney (14 December 1972), the control of coastal development in the District Council of Willunga (12 July 1973), the Mount Lofty Ranges (26 February 1976), Black Hill (4 November 1976), Port Adelaide Centre (8 September 1977), Willunga, Noarlunga and Meadows Rural Zone (11 May 1978), and centres in the City of Salisbury (19 October 1978 and 19 April 1979). Supplementary development plans have also been prepared for Naracoorte (authorised 11 September 1975), Whyalla (5 October 1972), Clare (26 October 1978), Western Murray Lakes (3 May 1979) and Leigh Creek South (21 May 1979).

#### **Development Control**

Control of development in accordance with a development plan is by regulation and the State Planning Authority or the appropriate local government body can recommend to the Minister that regulations be made. Such regulations may, for example, deal with land use zoning or reservation of land for acquisition for a particular purpose. The regulations must be exhibited publicly and opportunity given for objections to be lodged before submission to the Minister. Any person aggrieved by a decision given under a regulation may appeal to the Planning Appeal Board with a subsequent right of appeal to the Land and Valuation Court.

Most local councils in Metropolitan Adelaide have gazetted zoning regulations to control development within their areas. Outside of Metropolitan Adelaide, the Cities of Mount Gambier, Port Pirie and Whyalla also have gazetted zoning regulations. Many local authorities operate interim development control powers delegated to them by the State Planning Authority.

The State Planning Authority directly controls development in the Hills Face Zone, comprising the high land overlooking metropolitan Adelaide between Gawler and Sellicks Beach. The intention is to retain the rural character of the area. Also under direct control of the Authority is the extractive industry in those parts of the State under interim development control or with zoning regulations. The Authority has interim development control over the Flinders Ranges, the area around the proposed Redcliff petrochemical works, parts of Kangaroo Island, some small portions of Metropolitan Adelaide and land fronting the River Murray.

The Authority is empowered to buy land, either by agreement or compulsorily, to assist in promoting development in accordance with the development plan, and a Planning and Development Fund is provided to assist the Authority in carrying out this function.

The Control of land subdivision throughout the State, with the exception of the City of Adelaide where there is no control, is vested in the Director of Planning and the local government authority in the area in which the land is situated. If permission to subdivide is refused, there is a right of appeal to the Planning Appeal Board.

The Minister of Planning is responsible for the administration of the Planning and Development Act.

### Regional Open Space

By 31 December 1979, 4 595 hectares of land was acquired by the State Planning Authority for major open spaces and regional parks in the Adelaide Area at a cost of \$11 809 668.

During the year 550 hectares of land at Black Hill, valued at \$792 700 was transferred at no cost from the State Planning Authority to the Black Hill Trust to form the basis for the Black Hill Native Flora Park.

In other parts of the State a total of 4 314 hectares of land had been acquired by the Authority by the end of 1979 at a cost of \$1 551 176.

The Authority acquired several key properties during 1979 including Moana Sands, a unique area of coastal sand dunes south of Moana which contain remnants of an ancient Aboriginal culture, and Giles Park, an area of stringy bark and blue gum scrub overlooking the city between Horsnells Gully and Ashton with its own colony of koala bears.

Work on the development of Regency Park at Islington, north of Adelaide, was completed during 1979 and formally handed over by the Minister of Planning to the Enfield Council for its care and control in perpetuity. It comprises a nine-hole golf course, a licensed tavern, boating lake, oval, barbecues and picnic grounds, skateboard rink and playgrounds.

Concept plans were completed for the development of the Onkaparinga Estuary Reserve and O'Halloran Hill Reserve, and 36 000 trees were planted during 1979 as part of a comprehensive tree planting program.

Proposal plans for a new Caravan Park at Bashams Beach Reserve, Port Elliot were finalised.

### Monarto

A new city, eventually accommodating over 100 000 people, was to be established near Murray Bridge, 80 kilometres south-east of Adelaide.

The Monarto Development Commission, responsible for the implementation of the project, acquired 19 000 hectares of land. Most of the land is now being farmed but extensive areas have been planted with trees and regeneration of natural vegetation has been encouraged. Initial development areas were identified and servicing and subdivisional plans prepared.

Further development has been deferred for five years from 31 December 1977, and a complete review of the future of the project has now commenced.

### Coast Protection

The Coast Protection Act, 1972-1975 provides for the conservation and protection of the State's coastline, including its foreshore and beaches. A Coast Protection Board of six members has been established under the chairmanship of the Director of Planning. Its objectives are broadly to protect and restore the coast, to develop any part of it for enjoyment by the public and to carry out research.

The Board makes grants to local government authorities to assist them with projects and to help carry out work within the boundaries of the appropriate coast protection districts. Work would include the provision of boating facilities, protecting embankments, car park areas and other public amenities. Loss of sand from several metropolitan beaches is a major problem and the Board is devoting technical and financial resources to a sand replenishment program.

Coast protection districts may be established for any part of the coast, after which management plans are to be prepared setting out the measures needed to protect the coast and secure its most appropriate use. Proposed developments that are contrary to

the management plan may be refused by the Board subject to right of appeal to the Planning Appeal Board.

Two coast protection districts, Metropolitan and Yorke, were declared in 1973; Fleurieu coast protection district and South East were declared in 1974 and 1976 respectively. The declaration of the remaining three districts, Eyre, Spencer and Kangaroo Island coast protection districts will follow.

A consultant study of the Fleurieu district, which extends from the northern boundary of the hundred of Myponga to the centre of the Murray Mouth, was completed in 1978 and the draft management plans for the district, together with those for the Metropolitan coast protection district, were displayed for public comment in 1979. A management plan for the Yorke district which includes the coastline from Port Gawler to the northern boundary of the District Council of Port Broughton, will be prepared on completion of the in-house study of the district. Work was also commenced on a management plan for the South East Coast Protection District during 1979.

In 1978-79 the Coast Protection Board expended \$1 190 543 on foreshore protection, repairs, improvements and restoration and the purchase of land. Much of this work was undertaken by local government bodies who contributed a further \$541 815 towards the cost of the works and land.

#### **Department of Urban and Regional Affairs**

The Department of Urban and Regional Affairs was established in 1977 by the amalgamation of the State Planning Office, the Urban Land Price Control Unit, the Office of the Minister of Mines and Energy and Minister of Planning and the Office of the South Australian Land Commission.

The main functions of the Department are:

- (1) to assist the Minister in promoting more efficient and equitable urban and regional development; and
- (2) to assist the integration of urban and regional development programs and projects of all State Government agencies.

#### **Rundle Mall**

A special article on the development of Rundle Mall appeared on pages 114-18 of the *South Australian Year Book 1977*.

PART 4

## LAND SETTLEMENT

### 4.1 LAND TENURE

#### IDENTIFICATION OF LAND AND REGISTRATION OF TITLE

To facilitate the identification of land, the southern portion of the State encompassing all the arable land and certain pastoral areas has been subdivided into counties and these in turn have been generally subdivided into smaller units known as hundreds.

The first Surveyor-General, Colonel Light, had been instructed by the Colonisation Commissioners to divide the colony into towns and counties, and in 1842 the first nine counties were proclaimed. As the administration was having considerable difficulty in regulating the leasing of unsold lands for pasturage it was proposed in 1846 that boundaries of areas smaller than counties be created and the system of hundreds, used in some counties in England, was adopted.

The boundaries of early counties and hundreds followed natural features. As further counties and hundreds were declared, natural features suitable for boundary delineation were not always available and in most cases the boundaries were set parallel to lines of longitude and latitude.

In 1887 an area of 100 000 hectares was declared to provide for the town and irrigation area of Renmark on the River Murray. Similar areas were subsequently surveyed and proclaimed adjacent to other sections of the River.

There are currently forty-nine counties covering 23 per cent of the State, the last of these being declared in 1933. The counties have an average size of 463 000 hectares,

varying from County Light, north of Adelaide, with 217 470 hectares to County Jervois on Eyre Peninsula with 959 000 hectares.

Counties are generally subdivided into hundreds, although four northern counties remain undivided and a number of others are only partly subdivided. There is considerable variation in the size of hundreds, while the number of hundreds in a completely subdivided county varies from eight in Counties Alfred and Kintore to thirty-four in County Jervois. New hundreds are created from time to time, the present total being 535. Hundreds are further subdivided into sections which in turn may be divided into allotments or occasionally blocks.

Land is therefore, for the purposes of title, identified by the county, hundred, and section, and, where appropriate, block or allotment within which it falls. Land in towns and in proclaimed irrigation areas may further be identified as falling within that town or area.

#### Torrens System of Land Registration

Land transactions in South Australia are conducted under the Torrens System of land registration as provided by the Real Property Act, 1886-1979. This system, first introduced by the Real Property Act, 1858, was named after its author, Sir Robert Torrens, who was at that time Registrar-General of the Colony.

The Torrens System provides that the matter of title to land shall be a government responsibility. Each piece of land is represented by a certificate of title which, with very few (and in practice unimportant) exceptions, is guaranteed by the State. Retrospective examination which is necessary with general law title is eliminated and the costs and time involved in conveyancing can thus be kept to a minimum.

An amendment to the Real Property Act in 1967 provided for the creation of interests in land by a three-dimensional division of the land into strata units by means of strata plans. Under the provisions of the amendment, a strata plan related to a building on land creates individual private interests and public interests in the property depicted in the plan. The enactment of this legislation enabled titles to be issued for home unit developments within a system which provided for the individual rights of the unit owners and for their corporate rights and responsibilities in common property.

The following table shows details of mortgages, transfers and other transactions relating to land under the Real Property Act, 1886-1979 for each of the four years to 1979.

**Real Property Act Transactions, South Australia**

Item	1976	1977	1978	1979
\$'000				
Amount lent on mortgages .....	1 348 980	1 513 202	1 568 255	1 689 303
Amount discharged .....	439 447	504 297	493 147	n.a.
Number				
<i>Certificate of title:</i>				
Issues (a) .....	24 757	27 246	24 580	19 042
Transfers .....	54 357	47 533	43 215	44 803
<i>Mortgages (b):</i>				
Registrations .....	62 168	61 273	56 767	55 203
Discharges .....	54 023	51 661	51 367	52 241

(a) Includes limited titles and some replacement of old documents without change of ownership of land.

(b) Includes mortgages of Crown and other leases.

The Real Property (Registration of Titles) Act, 1945-1975 provides for the small proportion of land remaining under the general law to be converted to the Torrens System and this transition is still in progress in certain areas.

### SYSTEMS OF TENURE

#### CURRENT TENURE

In the table below, occupied land in South Australia is classified according to its present form of tenure. Thus 'Area sold, dedicated, etc.' does not represent the accumulated total of all alienated lands as certain alienated lands repurchased by the Crown are currently held under leases.

At 30 June 1979 land in South Australia was occupied as follows:

	Area Hectares	Proportion Per Cent
<b>Area sold, dedicated, etc.;</b>		
Sold .....	6 223 045	6.32
Free grants .....	393 848	0.40
Dedicated (a) .....	132 433	0.14
Under agreement to purchase .....	60 808	0.06
<b>Total .....</b>	<b>6 810 134</b>	<b>6.92</b>
<b>Area under lease and licence (b);</b>		
Perpetual .....	8 734 662	8.87
Pastoral .....	46 302 670	47.04
Other .....	435 706	0.44
<b>Total .....</b>	<b>55 473 038</b>	<b>56.35</b>
<b>Area in occupation .....</b>	<b>62 283 172</b>	<b>63.27</b>
<b>Remainder of State;</b>		
Lakes and lagoons .....	3 198 959	3.25
Open for allotment or selection .....	—	—
Other vacant land (c) .....	32 955 547	33.48
<b>Total area of State .....</b>	<b>98 437 678</b>	<b>100.00</b>

(a) Includes State forest reserves.

(b) Includes areas held under Mining Acts.

(c) Includes surveyed roads, railways and other reserves, 9 453 438 hectares; of which 7 948 396 hectares are set apart as Aboriginal reserves.

In 1901 the area sold, granted and leased, *i.e.* the area occupied, was 37 934 751 hectares, increasing to 57 472 548 in 1924, but falling to 52 370 744 in 1931 because of decreased areas under pastoral lease. Since 1931 there has been a fairly steady increase to the present figure of 62 283 172 hectares.

### LAND ADMINISTRATION

Approximately 90 per cent of the occupied area of South Australia comprises Crown land held under lease and as such is controlled by the Department of Lands. This Department is charged with the general administration of Crown lands, and with making available under appropriate tenure newly developed lands and such lands as come into the hands of the Crown by resumption, expiry, surrender or forfeiture of existing tenure. The consent of the Minister of Lands is required before the transfer, mortgage or sublease of any of the forms of tenure administered by the Department.

Land available for leasing is allotted by the Land Board and, in the case of pastoral lands, by the Pastoral Board, who interview applicants and make allotments on merit. The Boards also advise the Minister on matters connected with land settlement.

Leases and licences under the various mining Acts are issued and supervised by the Department of Mines, while the Woods and Forests Department and the Engineering and Water Supply Department are responsible for the issuing of leases over reserves and areas under their control.

### METHODS OF ALIENATING LAND

#### Sales under Agreement to Purchase

There is provision for Crown lands to be alienated through an agreement to purchase. The purchase money is payable over varying terms not exceeding sixty-four years and the purchaser must comply with certain special conditions concerning the improvement and the development of the land, including the fencing of the property within the first five years. It is not necessary for an agreement to run the full term as, subject to the Minister's approval, purchase may be completed after six years provided the purchaser has complied with all the necessary conditions. Land allotted under Agreements to Purchase amounted to 33 hectares in 1978-79.

#### Sales at Auction

Certain Crown lands may be sold at auction for cash. These include town lands, suburban lands exempt from the operations of the Land Board, and Crown lands which have been offered for lease and not taken up within two years. Town lands so sold are subject to limitations on resale and conveyance through mortgage during the first six years, and it is usually conditional that improvements, for an agreed function and of a certain minimum value, be erected within a stipulated period.

#### Free Grants and Reservations

A free grant of Crown lands may be made for any public purpose. Of the 393 848 hectares thus alienated at 30 June 1979, 310 799 hectares had been granted for the Defence Research Centre. Lands may also be dedicated and reserved for a variety of purposes such as forest reserves, Aboriginal reserves, national parks, conservation parks, recreation parks, parklands and schools.

### METHODS OF LEASING AND LICENSING LAND

#### Leases for Limited Terms

Pastoral lands outside the counties and large areas in the northern counties are held under pastoral leases granted for terms of forty-two years (except in the case of previously unoccupied lands when the term is twenty-one years) or for shorter terms where the land may be required for other purposes. Under the conditions of these leases the lessee must expend in improvements a sum as recommended by the Pastoral Board and must comply with certain conditions on stocking. Rent is based on the carrying capacity of the land, the distance from markets and the proximity of transport facilities, and in the case of recent leases, is reviewed every seven years. Such lands may be reallocated to the same lessees on expiry of the existing terms.

Persons may be granted a permit to search for water and if successful may take up a lease of 250 square kilometres of land. Such leases are granted for forty-two years at a nominal rental for the first ten years and a low rental thereafter. Conditions of stocking are also modified.

In certain circumstances, for example, where land has not been surveyed or its

potential is uncertain, or where permanent alienation is not desirable, miscellaneous leases are issued for periods up to twenty-one years. Certain business and industrial sites may also be held under miscellaneous lease. Annual licences may be granted over Crown lands for certain industrial sites, grazing areas, fishermen's residences, holiday shack sites and other approved purposes.

Land reserved for the Woods and Forests Department was leased for cultivation or grazing purposes for a period not exceeding forty-two years. At 30 June 1979, there was no forest land under lease.

#### **Perpetual Leases**

Leases in perpetuity may be offered over Crown lands which have been surveyed or delineated on the public maps. The lessee is required to provide boundary fencing and may be required to clear and render available for cultivation a certain proportion of the land within a specified period.

In certain cases special perpetual leases are available under which no rent is payable for the first four years, and with less than full rent over the next six years.

Sections in government controlled irrigation areas are offered on perpetual lease and, if the land has not been cultivated previously, rents and water rates are payable on a sliding scale for the first three years. Certain improvements are required to be made. Town allotments in irrigation areas may be offered under perpetual lease either at auction, by calling applications, or may be let on annual licence. Allotments may also be offered at auction for cash or for agreement to purchase. Allotments not sold at auction may be sold by private contract.

During 1978-79, 3 251 hectares in irrigation areas were allotted under perpetual leases.

### **MINING CLAIMS, LEASES AND LICENCES**

#### **Legislation**

The granting of leases and licences and the pegging of new claims is governed by the Mining Act, 1971-1978. A total of 277 private mines was current at 30 June 1979. Mineral royalties received by the Department of Mines and Energy during 1978-79 amounted to \$4 074 000.

The following table shows tenements held under the Mining Act, 1971-1978 and the Petroleum Act, 1940-1978 for the last five years.

**Tenements Held Under Mining and Petroleum Acts, South Australia  
At 30 June**

Particulars	1975	1976	1977	1978	1979
Mineral claims .....	159	90	68	334	131
Precious stones claims .....	918	993	1 222	1 094	1 450
Leases .....	1 425	1 361	674	1 530	1 393
Exploration licences .....	73	80	120	109	123
Petroleum licences and permits .....	17	15	5	18	19

#### **Minerals Resumed**

The mineral rights on private land were resumed by the Crown in July 1972 so that all minerals are the property of the Crown. If minerals (other than extractive minerals) which have been resumed under the Mining Act, 1971-1978 are mined any royalties collected upon the minerals recovered are payable to the person so divested of his property in minerals upon application.

A royalty of 2·5 per cent (5 per cent for extractive minerals) of the value of the

minerals, immediately upon recovery from the earth, is payable to the Minister of Mines and Energy on all minerals (except precious stones) recovered and sold or used for commercial purposes. No royalty is payable on precious stones. Royalty for extractive minerals is payable to the Extractive Areas Rehabilitation Fund.

#### **Extractive Minerals**

Extractive minerals are defined as sand, gravel, stone, shell, shale or clay but does not include any such minerals that are mined for a prescribed purpose, nor fire-clay, bentonite or kaolin. No person is permitted to peg claims for extractive minerals on freehold land other than the person who, immediately before the operation of the Mining Act, 1971-1978 held the mineral rights or had rights to mine the minerals by holding a claim or lease over the deposit. Normal pegging rights apply to extractive minerals on other than freehold land or exempt land, and also apply to other minerals on freehold land.

The royalties collected from the mining of extractive minerals are paid into the Extractive Areas Rehabilitation Fund to be used in rehabilitating land disturbed by mining operations. The Fund may also be used for research into methods of mining engineering and practice with a view to reducing environmental damage or impairment. Receipts into this Fund during 1978-79 amounted to \$454 871.

#### **General Conditions**

A current miners right or, in the case of precious stones, a precious stones prospecting permit must be held by every prospector to authorise the pegging of the appropriate class of claim.

At least three weeks notice of entry for prospecting or mining purposes must be given to the landholder if the land is freehold or held on perpetual lease. Three weeks notice must also be given to any landholder before 'declared equipment' can be used on his land. In either case the landholder may lodge an objection with the Warden's Court.

A claim (other than a precious stones claim) has a maximum term of twelve months, is not transferable and must be converted to a lease before minerals can be removed for sale or used for commercial purposes.

A mining lease may be granted after twenty-eight days notice in the *South Australian Government Gazette* for a term of up to twenty-one years with certain rights of renewal. A mining lease is transferable with the Minister's consent and an annual rent is payable on a mining lease. Nineteen-twentieths of the rent collected on a lease on freehold land is paid to the landholder.

Exploration licences have a maximum term of two years and a maximum area of 2 500 square kilometres and are subject to the terms agreed. Twenty-eight days notice must be given in the *South Australian Government Gazette* before an exploration licence is granted.

Mining leases and exploration licences are granted under conditions which give proper consideration to the protection of the environment.

## **4.2 LAND SETTLEMENT SCHEMES**

### **CLOSER SETTLEMENT**

There is provision in the Crown Lands Act for acquisition of land for subdivision to encourage closer settlement. Such land is divided into blocks and offered under conditional agreements to purchase with payment over thirty-five and sixty-four year periods.

No land has been purchased for closer settlement since 1952-53, by which time 384 298

hectares had been purchased at a cost of \$5 730 400, including 21 008 hectares set apart for returned service personnel from the 1914-18 War, 1 302 hectares for forest and water conservation purposes and 10 758 hectares purchased in connection with the reclamation of River Murray swamp lands.

At 30 June 1979 a total of 44 589 hectares of closer settlement lands was held under agreement to purchase or lease.

### MARGINAL AREAS ASSISTANCE

The excessive opening up of the drier marginal lands for wheat growing resulted in many settlers in these areas being forced to leave their holdings, particularly in the 1930s.

Investigations showed that if the settlers were to succeed, cereal growing would need to be replaced by grazing. The Commonwealth Government established a Marginal Lands Improvement Fund to assist this development. The money was used to purchase properties from certain settlers with a view to enlarging the holdings of others, to provide fencing and water supplies and to pay small grants to settlers vacating holdings in which there was no equity.

The Fund was provided by the Commonwealth Government under the *Wheat Industries Assistance Act* 1938. An amount of \$1 426 000 was allocated to South Australia. By arrangement with the Commonwealth Government the rentals and income from sales of improvements on marginal lands which had been subject to adjustments under the above Fund are retained as an additional fund to be used for assistance to settlers in marginal areas. Receipts for 1978-79 amounted to \$27 315.

During 1967-68 an amount of \$150 000 was transferred from this Fund to the Farmers Assistance Fund. No advances were made from this Fund during 1978-79. The balance of the Fund at 30 June 1979 was \$509 044.

### CROWN LANDS DEVELOPMENT

The Crown Lands Development Act, 1943-1973, administered by the Department of Lands, provides for the development of Crown lands, or lands which the Department may purchase, and for the allotment of such lands to suitable settlers.

A substantial proportion of the land under the Act was developed with the object of inclusion in the War Service Land Settlement Scheme. Properties not accepted for the scheme were subsequently allotted under the Act, and since then a number of individual properties have been surrendered to the Crown for development and re-allotment to the former holders.

### ASSISTANCE FOR RETURNED SERVICE PERSONNEL

#### 1914-18 WAR

Following the 1914-18 War the State Minister for Repatriation was authorised to acquire land for the purpose of re-settling discharged servicemen. Such land could be purchased by agreement or acquired compulsorily, whether held in fee simple or under Crown lease. Crown lands could also be set apart for this purpose. The land acquired was subdivided where appropriate and offered under agreement to purchase, perpetual lease or a term lease. Provision was also made for the discharging of existing mortgages on freehold properties already held by ex-servicemen, with fresh mortgages in favour of the Minister of Repatriation.

In all, 3 801 ex-servicemen were settled under this Act with 3 008 settling in 'dry lands' and 793 in irrigation areas.

## 1939-45 WAR AND KOREA-MALAYA OPERATIONS

**War Service Land Settlement**

Under the War Service Land Settlement Scheme, provision was made for the settlement on rural holdings of certain ex-servicemen from the 1939-45 War and Korea and Malaya operations.

Suitable Crown land was made available and other land was acquired. This land was subdivided and developed to a stage where it could be brought into production by the individual settler within a reasonable time. Basic structural improvements were provided and it was then offered to eligible settlers on perpetual lease. Credit facilities are available to these settlers for working capital, the purchase of stock and equipment, and the effecting of further improvements.

During the first year after allotment in the case of 'dry lands' settlers, and the first year after an irrigation holding became self-supporting the settler was granted a living allowance and was exempted from the payment of rent or interest in respect of the holding, and of payments on account of principal or interest in respect of advances, other than advances for working capital. Provisions exist for a settler on 'dry lands' to convert property to freehold after a period of ten years by the payment of a fixed purchase price and the repayment of all advances. There is no provision for freeholding in government irrigation areas.

The following table shows for recent years the number of farms allotted and total expenditure under the War Service Land Settlement Scheme.

**War Service Land Settlement, South Australia  
Farms Allotted and Total Expenditure to 30 June**

Particulars	1976	1977	1978	1979
<b>Farms allotted:</b>				
Number .....	1 032	1 032	1 032	1 032
Area ('000 hectares) .....	285	285	285	285
<b>Expenditure:</b>				
State .....	9 638	10 210	10 734	10 775
Commonwealth Government;				
Acquisition of land .....	6 846	6 846	6 846	6 846
Development and improvement of land .....	31 682	31 658	31 650	31 648
Provisions of credit facilities .....	42 544	43 512	44 290	44 846
Other .....	15 875	16 537	17 379	17 579
Total expenditure by Commonwealth Government .....				
	96 947	98 553	100 165	100 919
Total expenditure .....	106 585	108 763	110 899	111 694

The Department of Lands administers the War Service Land Settlement Scheme on behalf of the Commonwealth Government. The Commonwealth Government provides the funds and meets the costs of the scheme with the exception of administration costs and two-fifths of any losses, which are met by the South Australian Government.

All large scale development operations under the scheme have now been completed. The principal areas settled are in the South East, on Kangaroo Island, Eyre Peninsula, and in irrigation areas along the River Murray.

**Loans and Allowances (Agricultural Occupations) Scheme**

The Commonwealth Government through the State Bank of South Australia provided financial assistance for the establishment or re-establishment of ex-servicemen in agricultural occupations. Loans were made for a variety of purposes and non-repayable allowances were made where income during the course of re-establishment proved to be inadequate. The payment of allowances and the advancing of new loans ceased in 1956-57 by which date loans totalling \$2 009 096 had been made to 1 288 ex-servicemen, and allowances totalling \$649 218 had been granted to 2 264 ex-servicemen.

An additional Marginal Lands Improvement Fund was established in 1943 from which expenditure of \$416 476 had been made to 30 June 1978 by the Department of Lands.

**SOUTH AUSTRALIAN LAND COMMISSION**

The South Australian Land Commission was established in November 1973 under the provisions of the Land Commission Act, 1973. In its first annual report to 30 June 1974 the Commission stated its objectives as being:

- (1) to stabilise the price of urban land by its active participation in the acquisition, management, development and disposal of land for the whole range of urban uses;
- (2) to divert the flow of land value increments resulting from the conversion of land to urban use or the assumption by land of a potentiality for urban use through community development, to the community;
- (3) to achieve comprehensive and orderly urban development which does not occur when development decisions are taken by individual land owners on the basis of their own personal situations.

Financial assistance has been provided by the Commonwealth Government under the *Urban and Regional Development (Financial Assistance) Act* 1974. At 30 June 1979, the Commission has received advances of \$52 730 572 for the acquisition of land for development purposes. Financial assistance (\$3 484 333 at 30 June 1979) has also been received from the State Government.

Land purchased or acquired by the Commission for urban purposes at 30 June 1979 was 5 003 hectares within localities designated for urban development in the Metropolitan Development Plan, 42 hectares in country towns and 1 747 hectares of land within localities designated for Metropolitan Open Space.

Since first releasing fully serviced housing allotments on to the market on 11 April 1975 at Happy Valley, the Commission has sold, to 30 June 1979, a total of 3 245 allotments from sixteen subdivisions in Salisbury, Meadows, Noarlunga, Marion, Tea Tree Gully, Munno Para and Mount Gambier.

A total of 666 fully serviced allotments were completed during 1978-79.

In addition to subdivisional development, the Commission continues to be involved in several other streams of activity such as, suburban scale planning, community and retail centre planning and development.

An important event for the Commission in 1977-78 was the enactment of the Tea Tree Gully (Golden Grove) Development Act, 1978 and the establishment under the Act of a Development Committee comprising State and local government representatives charged with the responsibility of overseeing the planning and development of the Commission's land holdings of approximately 1 300 hectares in Golden Grove.

The Commission's activities are carried out by a staff of 32 and extensive use is made of professional and management skills available in the consulting and development industries.

### PRIVATE LAND DEVELOPMENT SCHEMES

The most important private scheme in South Australia has been a project, begun in 1949 by the Australian Mutual Provident Society to develop a large area of land in the south-east of the State in what was previously known as the Ninety Mile Desert. The development of this area was made possible by the discovery that the retarded nature of the country was caused by certain soil deficiencies, and that these deficiencies could be overcome by the addition of trace elements (mainly copper sulphate and zinc sulphate) to the soil.

Large tracts of unimproved land were obtained either by purchasing existing leases or by Crown allotment. Intending settlers were employed by the Society in the development work, covering a period of approximately five years, and were then allotted a holding over which they had a perpetual lease title. The Society provided finance for the purchase of land, and for stock, plant and working expenses. In all, 38 880 hectares were taken up by employees of the Society.

In addition to the development of land for employees a large area was developed to various stages and sold to the public; sales in this category amounted to 132 435 hectares.

### ADVANCES TO THE RURAL SECTOR GOVERNMENT ADVANCES

#### Financial Details

The following table gives details of total advances made to the rural sector by government authorities and balances outstanding at 30 June 1979.

**Advances to Settlers, South Australia**

Particulars	Advances made during 1978-79	\$'000	Total Advance at 30 June 1979	Principal Outstanding at 30 June 1979	
				Persons	Amount \$'000
Department of Lands:					
Advances to soldier settlers .....	—	10 144	106	89	
Advances under closer settlements Acts .....	—	5 461	65	70	
Settlement of returned service personnel (1939-45 War) (a) .....	528	44 801	397	4 796	
Advances under Crown Lands Development Act .....	—	986	42	446	
Department of Agriculture:					
Advances to drought affected areas .....	8 752	22 618	1 274	18 885	
Advances under Marginal Dairy Farms Reconstruction Scheme (a) .....	8	1 995	148	679	
Advances under Rural Industry Assistance Scheme (a) .....	5 834	47 095	1 143	31 642	
Advances under Fruitgrowing Reconstruction Scheme (a) .....	—	411	235	379	
Advances under Beef Industry Assistance Schemes .....	30	764	67	381	
Advances to soldier settlers; Irrigation .....	—	2 096	39	39	
State Bank of South Australia:					
Advances to settlers for improvements (b) .....	43	4 688	279	1 264	
Advances under Vertebrate Pests and Fencing Acts (c) .....	—	2 987	36	60	
Advances under Loans to Producers Acts .....	4 316	46 755	321	18 412	
Total .....	19 511	190 801	4 152	77 142	

(a) Advances made from funds provided by the Commonwealth Government.

(b) Adjustment of cancelled and re-allotted holdings.

(c) Vermin proof fencing and loans for fencing and water piping.

**Advances Administered by State Bank**

In addition to advances made under schemes mentioned above, the State Bank administers certain funds provided by the State for rural development.

Under the Advances to Settlers Act, 1930-1972, the Bank makes advances to settlers for a variety of purposes including general improvements, the purchase of livestock and the discharging of existing mortgages. The Loans to Producers Act, 1927-1962 empowers the Bank to make advances for certain developmental projects and the purchase of certain capital equipment. The Bank also administers Acts providing loans for the construction of vermin-proof fencing, general fencing and the laying of water piping.

**Marginal Dairy Farms Reconstruction Scheme**

The Marginal Dairy Farms (Agreement) Act, 1971 ratified an Agreement between the South Australian and Commonwealth Governments to overcome the problem of low incomes within the dairy industry, particularly in the case of producers relying on the sale of milk or cream for manufacturing purposes. The scheme ceased on 31 December 1978.

The scheme provided for farmers whose farms had insufficient potential to become viable economic units, while based on the sale of milk or cream for manufacturing purposes, to voluntarily sell their land to the State at market value. The State could then dispose of the land on the basis of the most profitable and economic land use, particularly with a view to building other rural properties to economic levels. The scheme also provided for development/diversification loans in respect of an existing dairy, interest free loans for the on-farm purchase and installation of refrigerated bulk milk vats, and loans to dairy factories to facilitate the collection, storage and processing of refrigerated bulk milk.

At 30 June 1978, 359 applications had been received of which 273 were approved and eighty-six declined and \$1 195 532 had been expended on the purchase of dairy farms and other assistance to approved applicants.

**Rural Industry Assistance Scheme**

The Rural Industry Assistance (Special Provisions) Act, 1971 and Rural Industry Assistance Act, 1977 gave effect to agreements between the Commonwealth and South Australian Governments for a scheme of assistance which provides for carry-on finance, debt reconstruction, farm build-up, farm improvement, rehabilitation and household support loans.

Carry-on finance and debt reconstruction are designed to assist the farmer who, although having sound prospects on a long-term basis, has used all of his cash and credit resources and cannot meet his financial commitments.

Farm build-up is to assist the process whereby farms which are too small to be profitable can be enlarged to an economic unit.

Farm improvement is intended to assist in restoration of an uneconomic property to economic viability by improving the use of the property without increasing its size.

Rehabilitation and household support measures provide limited assistance to alleviate conditions of personal hardship.

Funds were provided initially by the transfer of the balance of the Primary Producers Debt Adjustment Fund (\$804 636) to the Rural Industry Fund. Other contributions to the Fund are made by the Commonwealth Government and at 30 June 1979, \$34 053 000 had been received. The State is liable for the repayment to the Commonwealth Government of 75 per cent of the moneys made available by the Commonwealth Government under the terms of the Rural Assistance (Special Provisions) Act, 1971 and 85 per cent of the moneys advanced under the terms of the Rural Assistance Act, 1977.

Total advances from the Fund by way of repayable loans to 30 June 1979 amounted to \$47 095 000.

Details of the number of applications received and the expenditure involved are shown in the following table.

**Rural Industry Assistance: South Australia, Applications and Approvals from Commencement of Operations to 30 June 1979<sup>(a)</sup>**

Debt reconstruction:		
Applications received .....	1 312	
Applications declined .....	781	
Applications approved .....	471	
Total assistance approved .....	\$15 500 000	
Average assistance approved .....	\$33 000	
Farm build-up:		
Applications received .....	1 381	
Applications declined .....	565	
Applications approved .....	740	
Total assistance approved .....	\$26 200 000	
Average assistance approved .....	\$35 000	
Farm improvement:		
Applications received .....	82	
Applications declined .....	34	
Applications approved .....	39	
Total assistance approved .....	\$407 400	
Average assistance approved .....	\$10 400	
Rehabilitation:		
Applications received/approved .....	24	
Total assistance approved .....	\$82 500	
Expenditure to 30 June 1977 .....	\$77 800	
Household support:		
Applications received .....	31	
Applications declined .....	—	
Applications approved .....	29	
Total assistance approved .....	\$169 000	

(a) Commenced 27 May 1971.

**Fruitgrowing Reconstruction Scheme**

The Fruitgrowing Industry (Assistance) Act, 1972 effected an agreement between the Commonwealth and South Australian Governments for a scheme of assistance to horticulturists to remove redundant plantings of trees of the varieties used in the production of canning peaches, pears, apricots, and fresh apples and pears. Growers were entitled to maximum levels of assistance of \$202 per hectare for canning fruits and \$142 per hectare for fresh fruits. Applications for assistance under the scheme closed on 31 December 1977.

Assistance was provided initially in the form of a secured loan bearing interest at the rate of 6.25 per cent a year. The grower was obliged to enter into an undertaking that for the next five years he will not replant on the property from which the trees have been removed, any trees of the type specified. On compliance with the undertaking, interest would be rebated, securities discharged and the loan converted into a grant.

Funds made available by the Commonwealth to 30 June 1978 were \$410 888.

### Beef Industry Assistance Scheme

The Beef Industry Assistance Act, 1975 provides for financial assistance to specialist beef producers for carry-on finance to assist the producer to reach commercial viability.

Funds totalling \$3 million were allocated to the scheme comprising \$1.5 million from State funds and a matching dollar for dollar advance by the Commonwealth Government.

The scheme provides for loans up to a maximum of \$15 000 for servicing essential carry-on requirements and interest at the rate of four per cent a year with repayment over a maximum period of seven years. No repayment of principal would be required during the first year of operation. Interest for the corresponding period would be capitalised.

At 30 June 1978, ninety-three applications for assistance had been approved and repayable advances of \$734 047 had been made to beef producers.

### Farmers Assistance Fund

The Primary Producers Emergency Assistance Act, 1967 provides a means of servicing the essential carry-on requirements of primary producers suffering loss as a result of drought, fire, flood, frost, animal or plant disease, insect pest or other natural calamity. Assistance is given to enable such persons to continue in the business of primary production where no other source of financial assistance is available to them and who, by virtue of the assistance, have a reasonable prospect of being able to continue in the business of primary production.

Payments and/or direct grants may also be made towards the cost of fodder or water for starving stock, including the transport of livestock to and from agistment and for any other purpose deemed necessary.

The first \$3.0 million expenditure in any calamity is to be borne from State funds.

Loans bear interest at the rate charged by the State Bank of South Australia in respect of overdraft loans made to primary producers at the time of making the advance.

### PRIVATE INSTITUTIONAL ADVANCES

Many financial institutions advance funds for rural development.

At July 1978 the major trading banks had advances outstanding to residents of South Australia employed in agriculture, dairying and grazing, of \$155.5 million. Branches of major pastoral finance companies located in South Australia also make similar advances.

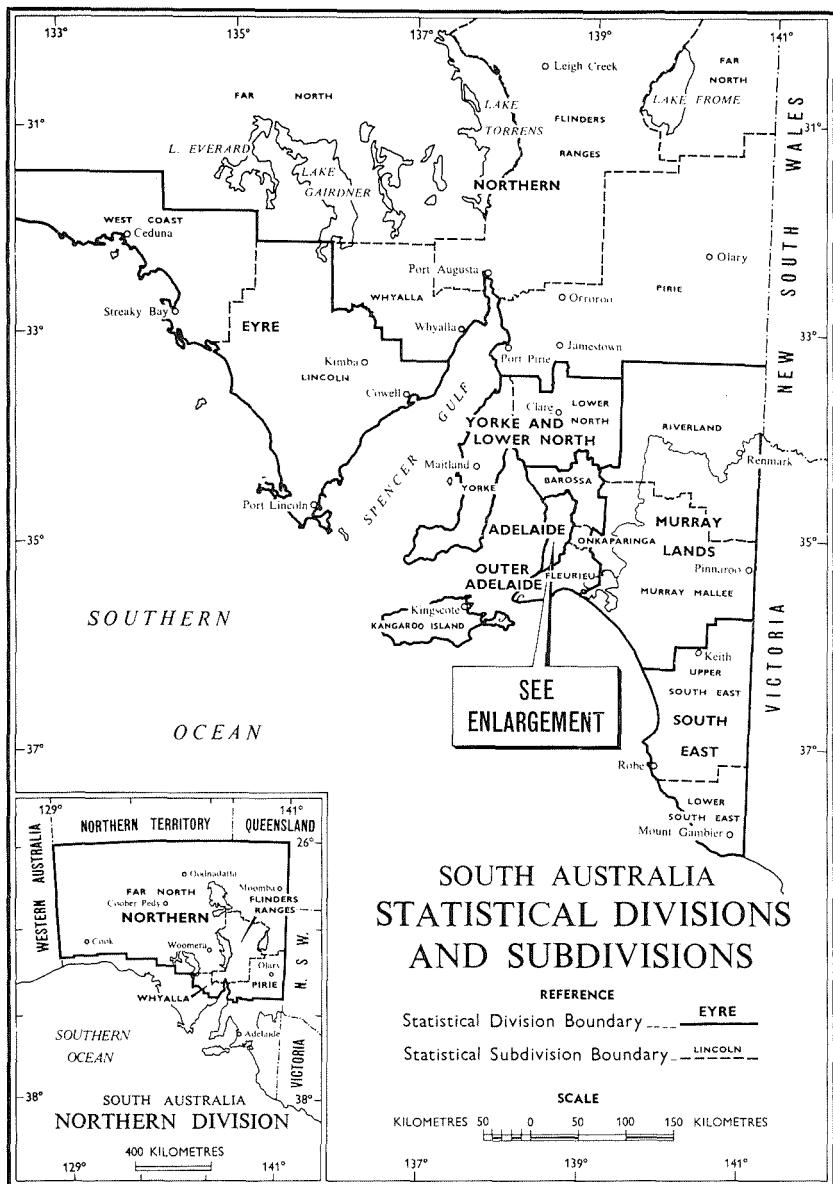
## 4.3 STATISTICAL DIVISIONS AND SUBDIVISIONS

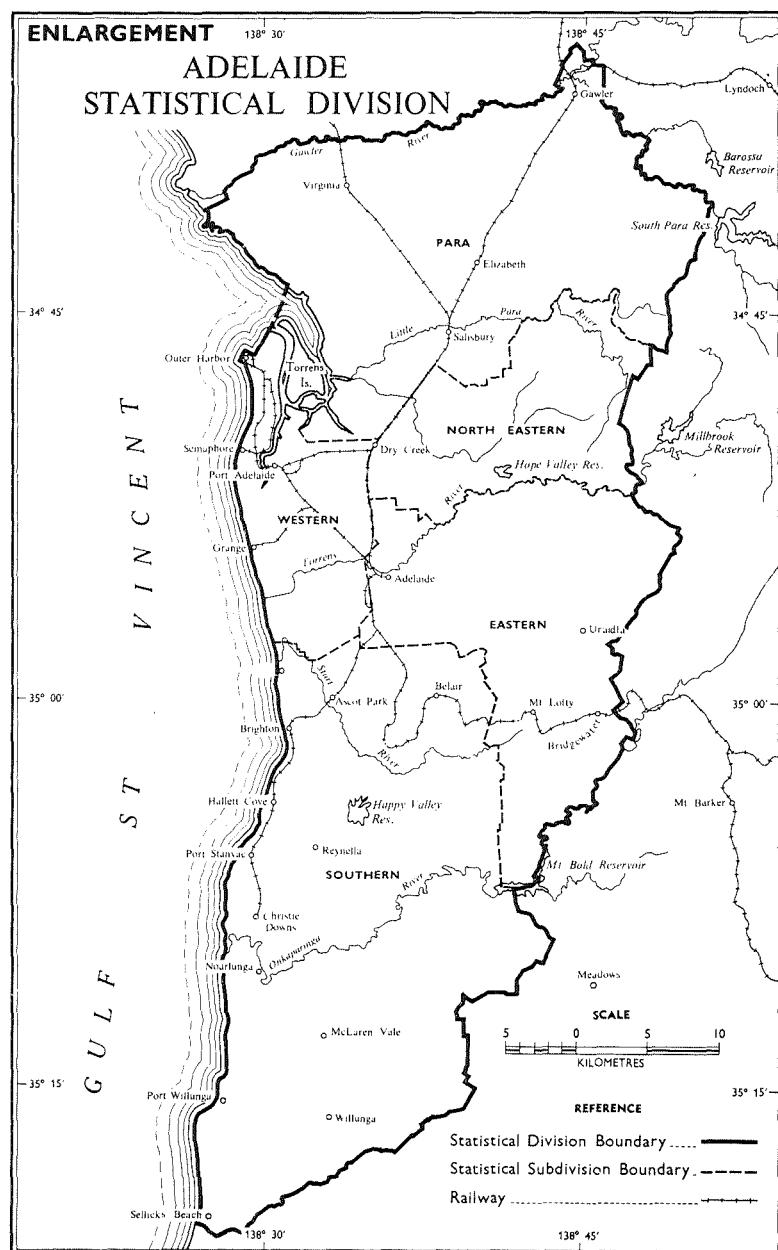
For the purpose of presenting the statistical series of South Australia, the State is divided into a number of areas which are entitled statistical divisions.

### PREVIOUS STATISTICAL DIVISIONS

Statistical series for South Australia have been published at various times under two different sets of statistical divisions—'Primary' Statistical Divisions, the boundaries of which have followed the boundaries of proclaimed counties, and 'Census' Statistical Divisions, where boundaries for the most part have followed the boundaries of local government areas.

Before 1889 agricultural statistics were published for counties from at least 1851, and local government areas from 1854. Publication of statistics by 'Primary' Statistical Divisions commenced in 1889 on the basis of five statistical divisions made up of





thirty-eight counties. In 1920-21 an additional division was created to limit the number of counties in each division (as the number had by this time increased to forty-eight) and the number of 'Primary' divisions remained at six from that date.

Early population census results were published on the basis of local government areas and counties, but for the 1891 and 1901 Censuses the five 'Primary' Statistical Divisions were used. The Census of 1911, which was the first conducted by the Commonwealth Government reverted to use of counties for published results whereas subsequent censuses, up to and including 1947, were published using local government areas. Details of the 1954 and subsequent population censuses have been published by 'Census' Statistical Divisions.

For the 1966 Census an additional division, the Adelaide Statistical Division, was delineated to embrace the area expected to contain the urban development of Adelaide during a period of at least twenty years.

Although, ideally, statistical division boundaries should remain unchanged over time so as to enable comparisons to be made of constant areas, growth in certain statistical divisions, together with the adoption of the Adelaide Statistical Division for the 1966 Population Census, made it desirable to review the boundaries and to select a new group of statistical divisions.

The new statistical divisions were designed to represent closely allied and meaningful areas of production and community interest and where areas smaller than divisions were considered to be important, subdivisions were introduced.

These statistical divisions and subdivisions were adopted for the publication of official statistics from 1 January 1971.

#### CURRENT DIVISIONS AND SUBDIVISIONS

From 1 July 1976 new statistical divisions and subdivisions were adopted for the publication of official statistics. Maps showing the new statistical divisions and subdivisions are included on pages 108 and 109. A more detailed article together with descriptions of the divisions and subdivisions was included on pages 135-43 of the *South Australian Year Book 1977*.

## PART 5

# POPULATION

## 5.1 THE CENSUS

### PRE-FEDERATION ACTIVITY

#### Early 'musters'

Population returns in one form or another have existed from a very early period in the history of Australia. The earliest enumerations were known as 'musters', and although the actual results of very few of them have been preserved, it is probable that during the early days of colonisation they were of frequent occurrence. The first official 'muster' was taken in 1788 soon after the new settlement at Sydney Cove was formed, and in 1803 the first 'muster' of convicts in Van Diemen's Land (now Tasmania) was conducted.

#### Development of the Census

The first regular census in Australia was taken in New South Wales in November 1828, and included the population of Moreton Bay (now Queensland) but not Van Diemen's Land (Tasmania). Details of the names, ages and civil conditions of the inhabitants were sought. The next census was taken in 1833, and was followed by another in 1836, when arrangements were made for the enumeration of the population of the newly-established settlement at Port Phillip (Victoria). The first censuses taken in Tasmania, Victoria and Queensland as separate colonies were in 1841, 1854 and 1861 respectively. The first recognised census in South Australia was taken in 1844 and in Western Australia in 1848. The 1881 census was the first simultaneous census taken in Australia and formed part of the first simultaneous census of the British Empire.

## CENSUSES OF AUSTRALIA

Under the Commonwealth of Australia Constitution Act of 1900, 'Census and Statistics' became Commonwealth Government functions and with the passing of the empowering legislation, the *Census and Statistics Act* 1905, all censuses of Australia have been taken under the authority of this Act and the regulations made thereunder. The first Australian census collected under the Act was that of 1911; subsequent censuses were taken in the years 1921, 1933, 1947, 1954, 1961, 1966, 1971 and 1976, while the next census is planned for 1981. The Act provides that the census should be taken by means of a householder's schedule delivered to every dwelling and that this schedule should contain particulars of the dwelling and its inmates.

### Periodicity and Date of the Census

The *Census and Statistics Act* 1905 provided that the Census should be taken 'in the year one thousand nine hundred and eleven and in every tenth year thereafter'. But in 1930 this was amended by the addition of the words 'or at such other time as is prescribed'. Because of the economic depression prevailing in 1931 the third Australian census was not taken until 1933, and because of war conditions the fourth Australian census was not taken until 1947. Consideration was then given to the practicability of holding future censuses in the series of years originally envisaged. However, it was considered that the interval of years from 1947 to 1951 was too short; therefore it was decided to take the fifth census in 1954 at the mid-point of the period from 1947 to 1961. The sixth census was held in 1961. Because of the administrative demand for more frequent counts of the population the seventh census was held in 1966, the eighth in 1971 and the ninth in 1976.

The *Census and Statistics Act* provides that 'the Census day shall be a day appointed for that purpose by proclamation', but the actual date is not specified. The census is conducted on a *de facto* basis, *i.e.* it records the population actually in Australia at the place where located on census day (as distinct from a *de jure* basis, which records the population according to place of usual residence). However, for the 1976 Census there is facility to extract population details on a *de jure* basis from the local government level to the whole State. In the selection of census day every endeavour is made to choose a date when there is a minimum displacement of population. In 1911 and 1921, census day was near the beginning of April, but in 1933 and subsequently, census day has been at the end of June because this time has fulfilled the condition mentioned and is otherwise suitable, being the end of a financial year and of a quarterly period used extensively for statistical purposes.

### Scope of the Census

The census covers the population and dwellings of Australia.

Persons excluded from results of censuses up to 1966 were:

- (i) diplomatic representatives of other Governments and their families and staffs having diplomatic immunity in accordance with international practice;
- (ii) full-blood Aboriginals, pursuant to Section 127 of the Constitution which specifically excluded them from the count of the population.

Diplomatic representatives, families and staffs are still excluded but, following the results of a referendum held in 1967, Section 127 of the Constitution was repealed and full-blood Aboriginals were included in censuses from 1971. In 1971 Census publications, where 1966 figures are also shown, these figures have been amended to include full-blood Aboriginals and thus provide comparability: this can be done for all tables other than those on the labour force.

Broadly the principle is to record at the census babies born at or before midnight of

census day and to exclude persons dying before midnight of census day. Travellers on ships in or between Australian ports at midnight of census day are also included.

For census purposes the Act defines a dwelling as 'a building, erection, or tenement, whether permanent or temporary, which is wholly or partly used for the purpose of human habitation and includes any ship or other vessel in any port of the Commonwealth or in any inland waters thereof, or any ship or vessel on a passage between any two Commonwealth ports'. Section 10 (2) provides that 'where a building is let, sublet, or held in different apartments and occupied by different persons or families, each part so let, sublet, or held and used for the purpose of human habitation shall be deemed a dwelling'. Measureable characteristics such as class of dwellings, materials of outer walls, number of inmates in relation to number of rooms, facilities and rentals are recorded.

The census data on occupied dwellings are obtainable from the completed householder's schedules. However, census collectors are responsible for recording, from personal observations or inquiry, particulars also of dwellings which are unoccupied on census day, including those temporarily unoccupied or those used for 'holiday purposes'. Dwellings excluded from census results are those occupied by accredited persons having diplomatic immunity. Dwellings occupied solely by full-blood Aboriginals also were excluded at censuses before 1971.

Before the 1976 Census, all householder's schedules were fully processed. The 1976 Census processing was undertaken in two stages. In the first stage all schedules were processed, with data on the number of males, females and persons extracted, together with some information on marital status, location, age distribution and birthplace. In the second stage, all schedules from non-private dwellings and 50 per cent of those from private dwellings were processed (except for the Northern Territory). The data/extracted in the second stage (except that for the Northern Territory) are thus subject to sampling errors. Further details on the nature and extent of such errors may be obtained from the publication *Making Sense of the Census* (Catalogue No. 2129.0).

A more detailed description outlining the history, purposes, legal basis, organisation and publication of the results of the population census in Australia was included on pages 77-86 of the *South Australian Year Book* 1968.

## 5.2 POPULATION GROWTH AND DISTRIBUTION

The population of South Australia had reached 17 366 persons at the first Census on 26 February 1844. In 1861, twenty-five years after the first settlers arrived, the population was 126 830 and this figure had more than doubled by the Census in 1881. By 1921 the population was almost 500 000 persons and it is estimated to have reached 1 000 000 persons in January 1963. The population at 30 June 1976 was estimated as 1 261 600 persons.

South Australia's population as recorded at the 1976 Census has been adjusted for underenumeration utilising results from a post-enumeration survey conducted after the census to measure the degree of census error. Net underenumeration was derived by comparing results from the census and the survey and identifying omissions and duplications in the census. Upward adjustment made was 1.35 per cent for 1976. The 1971 Census figure has been adjusted for underenumeration revealed in a similar survey and further revised following reconciliation of intercensal recordings of natural increase and migration, giving a net upward adjustment of 0.99 per cent.

## Population: South Australia, Censuses 1844 to 1976

Census Date	Population (a)			Average Annual Increase	
	Males	Females	Persons	Number	Per Cent
1844 26 February .....	9 686	7 680	17 366	.	.
1846 26 February .....	12 670	9 720	22 390	2 512	14.47
1851 1 January .....	35 302	28 398	63 700	8 262	36.90
1855 31 March .....	43 720	42 101	85 821	5 530	8.68
1861 8 April .....	65 048	61 782	126 830	6 835	7.96
1866 26 March .....	85 334	78 118	163 452	7 324	5.78
1871 2 April .....	95 236	90 189	185 425	4 395	2.69
1876 26 March .....	109 841	102 687	212 528	5 421	2.92
1881 3 April .....	145 113	130 231	275 344	12 563	5.91
1891 5 April .....	161 920	153 292	315 212	3 987	1.45
1901 31 March .....	180 485	177 861	358 346	4 313	1.37
1911 3 April .....	207 358	201 200	408 558	5 021	1.40
1921 4 April .....	248 267	246 893	495 160	8 660	2.12
1933 30 June .....	290 962	289 987	580 949	7 149	1.44
1947 30 June .....	320 031	326 042	646 073	4 652	0.80
1954 30 June .....	403 903	393 191	797 094	21 574	3.34
1961 30 June .....	491 406	480 081	971 487	24 913	3.13
1966 30 June .....	550 196	544 788	1 094 984	24 699	2.54
1971 30 June(b) .....	586 051	587 656	1 173 707	15 745	1.44
1976 30 June(b) .....	620 162	624 594	1 244 756	14 210	1.21

(a) Excludes full-blood Aboriginals before 1961 Census. (b) 1971 and 1976 Census figures have not been adjusted for underenumeration. Adjusted figures were 1 185 300 and 1 261 600 respectively.

In the following table, increases in the population have been classified as *recorded natural increase* (the excess of recorded births over recorded deaths) and *other increases* (which consists mainly of the excess of arrivals over departures, either from overseas or interstate).

Increases in the Population, South Australia<sup>(a)</sup>

Period	Recorded Natural Increase			Other Increase(b)			Total Increase Persons
	Males	Females	Persons	Males	Females	Persons	
<b>Annual Average:</b>							
1881-1890 .....	3 349	3 535	6 884	(—) 1 488	(—) 1 141	(—) 2 629	4 255
1891-1900 .....	2 832	3 024	5 856	(—) 973	(—) 567	(—) 1 540	4 316
1901-1910 .....	2 665	2 745	5 410	(—) 44	(—) 404	(—) 448	4 962
1911-1920 .....	3 508	3 614	7 122	366	926	1 292	8 414
1921-1930 .....	3 131	3 300	6 431	1 201	714	1 915	8 346
1931-1940 .....	(c) 1 787	(c) 1 929	(c) 3 716	(—) 860	(—) 397	(—) 1 257	2 459
1941-1950 .....	(c) 3 977	(c) 4 026	(c) 8 003	2 705	1 671	4 376	12 379
1951-1960 .....	5 631	5 923	11 554	6 279	5 585	11 864	23 418
1961-1970 .....	5 980	6 401	12 381	4 206	4 975	9 181	21 562
<b>Year:</b>							
1971 .....	6 487	6 823	13 310	3 204	2 619	5 823	19 133
1972 .....	5 822	6 258	12 080	924	1 113	2 037	14 117
1973 .....	4 973	5 599	10 572	3 942	3 194	7 136	17 708
1974 .....	4 761	5 184	9 945	8 154	8 248	16 402	26 347
1975 .....	4 746	5 292	10 039	(—) 2 456	(—) 3 841	(—) 6 297	3 742
1976 .....	4 376	4 572	8 948	1 106	1 433	2 539	11 487
1977 .....	4 596	4 886	9 476	2 797	2 785	5 582	15 058
1978 .....	4 021	4 774	8 795	(—) 905	(—) 626	(—) 1 531	7 264

(a) Excludes full-blood Aboriginals before 1961. (b) Figures from 1971 exclude short-term overseas migration. (c) Deaths of defence personnel (except those registered on civil registers during 1940 and 1941) not deducted in calculating natural increase.

As from June 1971, intercensal estimates of overseas migration exclude short-term (less than one year) movements, consistent with the measurement of interstate migration. Annual average increases which are given for each 10-year period since 1861 show some important aspects of the development of the State, namely:

- (i) the net migration, especially of males, away from South Australia following the mineral discoveries in other States in the 1880s and early 1890s;
- (ii) the slow growth during the economic depression of the 1930s when natural increase fell to a particularly low level; and
- (iii) the high rate of migration in the post 1939-45 War period up to 1960.

#### Rate of Increase of Population, South Australia and Australia<sup>(a)</sup>

Period	South Australia			Australia		
	Recorded Natural Increase	Other Increase	Total Increase	Recorded Natural Increase	Other Increase	Total Increase
<b>Annual Average:</b>						
1881-1890 .....	22.67	(—)8.66	14.01	19.96	14.23	34.19
1891-1900 .....	16.90	(—)4.44	12.46	16.91	0.71	17.62
1901-1910 .....	14.70	(—)1.22	13.48	15.29	1.00	16.29
1911-1920 .....	15.99	2.90	18.89	15.77	4.20	19.97
1921-1930 .....	11.87	3.53	15.40	12.97	5.23	18.20
1931-1940 .....	(b) 6.33	(—)2.14	4.19	(b) 7.92	0.60	8.52
1941-1950 .....	(b) 12.50	6.83	19.33	(b) 12.04	4.34	16.38
1951-1960 .....	13.81	14.18	27.99	13.71	8.73	22.44
1961-1970(c) ...	11.57	8.58	20.15	11.79	5.75	17.53

(a) Rate per 1 000 of mean population. (b) Deaths of defence personnel (except those registered on civil registers during 1940 and 1941) not deducted in calculating natural increase. (c) Excludes full-blood Aborigines before 1961.

The State's rate of population increase was slower than the Australian rate in every decade from 1881-90 to 1931-40. In the next two decades the steep rise in the rate of net migration enabled an above-average growth rate to be achieved, and this was maintained until 1966. Since 1966 however, the State's growth rate has generally been below the Australian rate.

Estimates of the population of the State for the last six years are given in the following table. The total increase for each year and the rate of growth are also shown.

#### Estimated Population at 31 December, South Australia

Year	Males	Females	Persons	Total Increase for Year	Rate of Growth	Per cent
1973 .....	612 800	614 500	1 227 200	17 700	1.46	
1974 .....	625 700	627 900	1 253 600	26 300	2.15	
1975 .....	628 000	629 300	1 257 300	3 700	0.30	
1976 .....	633 400	635 300	1 268 800	11 500	0.91	
1977 .....	640 800	643 000	1 283 800	15 100	1.19	
1978 .....	643 900	647 200	1 291 100	7 300	0.57	

Intercensal estimates of population are derived by adding to the population ascertained at the census the recorded natural increase and the allocation to the State of portion of the net gain to Australia by overseas migration; gains and corresponding losses that result from movement between South Australia and other States are also taken into account, in so far as they are recorded as transfers of residence under family allowance procedures or Commonwealth Government electoral procedures, supplemented by results of any special count or sample survey. The estimates above have been revised according to results of the 1971 and 1976 Censuses adjusted for underenumeration.

The estimated mean population for South Australia is calculated for the years ended 30 June and 31 December. Estimates for the last six years are shown in the next table.

#### Estimated Mean Population, South Australia<sup>(a)</sup>

Year	Year Ended 30 June			Year Ended 31 December		
	Males	Females	Persons	Males	Females	Persons
1973 .....	604 100	605 700	1 209 900	608 300	610 000	1 218 300
1974 .....	612 600	614 200	1 226 700	617 000	618 600	1 235 600
1975 .....	621 600	623 500	1 245 100	625 400	627 400	1 252 800
1976 .....	627 600	629 000	1 256 500	630 200	631 700	1 261 900
1977 .....	633 500	635 300	1 268 800	637 400	639 300	1 276 700
1978 .....	640 600	642 700	1 283 300	642 600	645 200	1 287 700

(a) Figures have been adjusted for underenumeration.

#### EARLY HISTORY OF SETTLEMENT

A detailed description of early settlement in South Australia together with information on the 1851 Census was included on pages 116-7 of the *South Australian Year Book* 1970.

#### DISTRIBUTION OF POPULATION

##### Urban Centres

Commencing with the 1966 Census, a boundary has been drawn at each census around each population cluster of 1 000 or more persons (or around known holiday resorts of less population if they contain 250 or more dwellings of which at least 100 are occupied). These clusters are named urban centres and the population and dwellings enumerated therein are classified as urban for statistical purposes.

When delimiting urban centres of less than 25 000 population the urban centres are determined subjectively (by inspection of aerial photographs, by field inspection and/or by consideration of any other information that is available). All continuous urban growth is included, together with close but non-contiguous development which could be regarded as part of the centre. For urban centres with 25 000 or more population the basic criterion used is *population density*. The geographic units classified according to the density criterion are collection districts, the smallest units available, which must have a density of at least 200 persons per square kilometre for inclusion in the urban centre. A gap in urban development of less than three kilometres (by the shortest rail or road distance) is ignored while urban areas three or more kilometres apart are treated as separate even if the gap comprises mainly reserved land or a natural barrier. Particular rules apply to contiguous areas with special functions such as airports, sporting areas and industrial areas which do not meet the density criterion.

The boundary of such an urban centre is thus a moving one which reflects the process of urbanisation. The use of objective criteria enables valid comparisons to be made between one urban centre and another, and between the population for an urban centre at one census with the population at succeeding censuses.

### Population in Urban Adelaide

At the 1966 Census, Urban Adelaide contained nearly all the metropolitan area as defined at the 1961 Census, and, in addition, included the City of Elizabeth and large portions of the Cities of Salisbury and Tea Tree Gully, and small parts of Munno Para and East Torrens District Councils. Results of the 1971 Census showed that Urban Adelaide had extended to encompass the whole of the urban area of Reynella-Port Noarlunga as well as fringe development particularly in northern suburbs (see map on page 118).

Urban Adelaide as defined for the 1976 Census comprised 19 complete local government areas and part of each of seven others and totalled 603.2 square kilometres.

Over the past decade there has been a considerable fall in the population of the City of Adelaide, and lesser falls in all of the older municipalities close to the city, namely Prospect, Hindmarsh, Thebarton, Unley, Kensington and Norwood, and St Peters. The greatest proportionate increases in population have occurred in the local government areas of Munno Para and Salisbury (generally north of the city); Campbelltown and Tea Tree Gully (north-east); Meadows, Mitcham and Noarlunga (south-west). Recently, development at West Lakes has brought about a substantial increase in Woodville's population.

Although figures for Urban Adelaide, defined according to the density criteria, are not available for the 1947 and 1954 Censuses, there appears to have been a continual increase in the proportion of the total State population residing in Urban Adelaide until the 1971 Census. At the 1961 Census, the population of Urban Adelaide defined according to the density criteria is estimated to have been 580 449 persons or 59.9 per cent of the total State population and this figure had increased to 728 279 (66 per cent) at the 1966 Census.

In 1971, the amalgamation of Urban Adelaide and Urban Reynella-Port Noarlunga, together with the inclusion of further peripheral development, resulted in an increase to 809 482 persons (69 per cent of the State population). At the 1976 Census, Urban Adelaide's share of the total State population remained unchanged.

**Urban and Rural Population, South Australia, Censuses 1921 to 1976<sup>(a)</sup>**

Census	Urban				Rural		Total (Including Migratory)	
	Adelaide <sup>(b)</sup>		Other <sup>(c)</sup>					
	Number	Per Cent	Number	Per Cent	Number	Per Cent		
1921 .....	255 375	51.57	41 637	8.41	195 054	39.39	495 160	
1933 .....	312 619	53.81	51 456	8.86	214 762	36.97	580 949	
1947 .....	382 454	59.20	65 911	10.20	196 007	30.34	646 073	
1954 .....	483 508	60.66	110 107	13.82	201 133	25.23	797 094	
1961 .....	587 957	60.66	177 380	18.30	200 065	20.64	969 340	
1966 .....	(b) 728 279	66.51	174 964	15.98	190 167	17.37	1 094 984	
1971(d) .....	809 482	68.97	183 187	15.61	179 148	15.26	1 173 707	
1976(d) .....	857 196	68.85	198 777	15.97	187 546	15.07	1 244 756	

(a) Excludes full-blood Aboriginals before the 1966 Census.

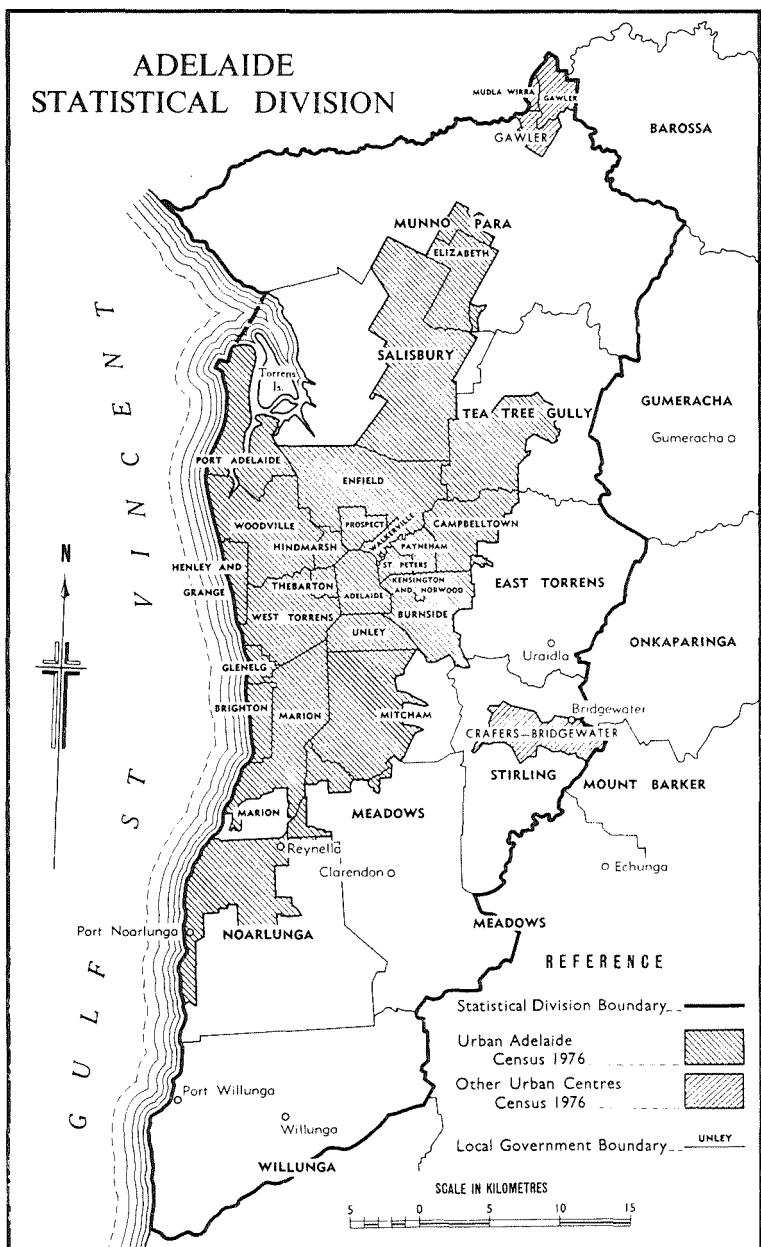
(b) See definition of Urban Adelaide.

(c) 'Other Urban' up to the 1947 Census comprised all municipalities outside Urban Adelaide. For the 1954 and 1961 Censuses non-municipal towns of 1 000 or more persons were also included, but in 1961 municipalities of less than 1 000 persons were excluded. The 1966, 1971 and 1976 figures comprise clusters of 1 000 or more persons and a small number of holiday resorts which are regarded as urban on a dwelling density basis.

(d) The figures are not adjusted for census underenumeration.

### Population in Other Urban Centres

Only a very small proportion (16 per cent) of South Australia's population is located in urban centres outside of the capital city compared with the three eastern States, New South Wales, Victoria and Queensland. Whereas, in each of the eastern States, there are



at least four centres outside the capital city with a population in excess of 20 000, Whyalla with a population of 33 426 at the Census of 30 June 1976 is the only such centre in South Australia.

#### Population of Urban Centres: South Australia, Censuses 1971 and 1976<sup>(a)</sup>

Urban Centre	Census at 30 June		Urban Centre	Census at 30 June	
	1971	1976		1971	1976
Adelaide .....	809 482	857 196	Moonta .....	1 570	1 751
Angaston .....	1 813	1 734	Mount Barker .....	2 475	3 204
Balaklava .....	1 114	1 237	Mount Gambier .....	17 934	19 292
Barmera .....	1 687	1 946	Murray Bridge .....	7 441	8 740
Berri .....	2 713	2 890	Naracoorte .....	4 429	4 571
Bordertown .....	1 979	1 983	Nuriootpa .....	2 468	2 808
Burra .....	1 276	1 201	Penola .....	1 293	1 254
Ceduna .....	2 070	2 327	Peterborough .....	3 023	2 760
Clare .....	2 099	2 260	Port Augusta .....	12 224	13 092
Coober Pedy .....	1 394	1 903	Port Broughton .....	508	654
Crafers-Bridgewater	5 308	6 600	Port Elliot .....	566	768
Crystal Brook .....	1 181	1 410	Port Lincoln .....	9 158	10 272
Gawler .....	6 959	8 596	Port MacDonnell ...	585	712
Goolwa .....	681	1 148	Port Pirie .....	15 456	15 005
Jamestown .....	1 331	1 325	Quorn .....	1 008	1 048
Kadina .....	2 828	2 849	Renmark .....	3 278	3 371
Kapunda .....	1 261	1 362	Strathalbyn .....	1 535	1 701
Keith .....	1 212	1 191	Streaky Bay .....	914	1 008
Kingscote .....	1 011	1 121	Tailend Bend .....	1 982	1 999
Kingston (SE) .....	1 173	1 250	Tanunda .....	1 939	2 254
Lobethal .....	1 377	1 422	Victor Harbor .....	3 527	4 279
Loxton .....	2 663	2 786	Waikerie .....	1 252	1 611
Maitland .....	1 020	1 017	Wallaroo .....	2 097	2 045
Mannum .....	2 043	2 137	Whyalla .....	32 109	33 426
Millicent .....	5 075	5 471	Woomera .....	(b) 4 082	2 958

(a) See text for definition of 'urban'. Population figures have not been adjusted for census underenumeration.

(b) Included Maralinga in 1971.

Between 1971 and 1976 most urban centres beyond the Adelaide Statistical Division experienced population growth; this was most evident in the River Murray towns, the Lower South East and the West Coast. The 'Iron Triangle' was somewhat of an enigma in that Whyalla and Port Augusta continued to expand, whereas Port Pirie's population declined.

#### Statistical Divisions

Around Urban Adelaide a further boundary has been defined. This boundary circumscribes the area in close economic and social contact with the urban centre, and which contains the anticipated urban development of the city for a period of at least twenty to thirty years. This boundary defines the Adelaide Statistical Division (see map on page 118). In addition to Urban Adelaide there are two urban centres within the Adelaide Statistical Division, Urban Gawler and Urban Crafers-Bridgewater.

The six further statistical divisions which have been delineated in South Australia are mainly amalgamations of local government areas. They represent closely allied and meaningful areas of production and community interest. Factors taken into account when determining their boundaries were differential living zones, patterns of retail

shopping, location and nature of industry, transport routes, provincial newspaper circulation, coverage of provincial radio and television stations, spheres of activity of cultural groups and sporting associations.

The population of the Adelaide Statistical Division at the time of the 1966 Census together with estimates at 30 June 1971, 1976 and 1978 is shown in the following table.

Population at 30 June, Adelaide Statistical Division<sup>(a)</sup>

Local Government Area	Census	Estimates		
	1966	1971	1976	1978
Adelaide (C) .....	18 619	16 500	13 900	13 500
Brighton (C) .....	22 638	22 900	21 800	21 000
Burnside (C) .....	38 776	39 900	39 300	38 100
Campbelltown (C) .....	32 083	38 100	41 500	42 400
East Torrens (DC) .....	3 822	4 300	4 900	5 200
Elizabeth (C) .....	32 956	33 600	34 000	33 900
Enfield (C) .....	80 336	(b) 78 100	74 400	71 200
Gawler (M) .....	5 703	5 600	6 200	6 300
Glenelg (C) .....	14 763	15 500	14 700	14 200
Gumeracha (DC) (part) .....	(c)	(c)	800	800
Henley and Grange (C) .....	14 146	16 400	16 900	16 500
Hindmarsh (M) .....	11 367	10 400	8 800	8 400
Kensington and Norwood (C) .....	11 943	11 200	9 800	9 400
Light (DC) (part) (d) .....	155	200	500	700
Marion (C) .....	66 984	68 600	68 700	69 800
Meadows (DC) (part) .....	2 824	5 200	12 400	16 300
Mitcham (C) .....	52 889	58 000	60 300	59 900
Munno Para (DC) .....	14 279	20 400	22 700	24 700
Noarlunga (C) .....	14 214	28 700	47 900	56 200
Payneham (C) .....	16 847	17 800	17 900	17 300
Port Adelaide (C) .....	39 846	39 300	36 500	36 700
Prospect (C) .....	21 415	21 100	19 700	18 900
Salisbury (C) .....	35 766	56 600	78 100	83 500
Stirling (DC) .....	7 552	8 500	11 100	12 400
St Peters (M) .....	11 339	10 800	9 400	9 100
Tea Tree Gully (C) .....	21 315	36 900	55 700	62 000
Thebarton (M) .....	12 303	11 900	10 400	9 900
Unley (C) .....	39 735	40 300	37 500	36 200
Walkerville (M) .....	4 593	(b) 7 300	7 300	7 100
West Torrens (C) .....	46 233	50 500	48 600	46 800
Willunga (DC) (part) .....	2 190	2 700	4 200	6 000
Woodville (C) .....	73 930	73 400	76 200	76 600
Total .....	771 561	850 700	912 100	930 500

(a) Figures for 1971 and 1976 have been adjusted for Census underenumeration. Hence, figures for 1971 and 1976 and 1978 are not strictly comparable with those for 1966.

(b) Comparisons with previous censuses are affected by transfer in July 1970 of the suburb of Vale Park (approximately 2 200 persons) from Enfield (C) to Walkerville (M).

(c) Part of Tea Tree Gully (C) transferred to Gumeracha in July 1976.

(d) Mudla Wirra (DC) amalgamated with Freeling (DC) to form Light (DC) in March 1977.

(C) Municipality with city status (M) Municipality (DC) District Council

The estimated population of statistical divisions and subdivisions at 30 June 1971, 1976 and 1978 are shown in the following table.

**Estimated Population of Statistical Divisions and Subdivisions, South Australia<sup>(a)</sup>**

Statistical Division and Subdivision	30 June		
	1971	1976	1978
<b>Adelaide:</b>			
Para .....	91 000	108 400	115 400
North Eastern .....	119 900	145 200	149 700
Western .....	222 500	216 100	212 600
Eastern .....	215 700	212 300	209 500
Southern .....	201 600	230 000	243 300
Total Adelaide .....	850 700	912 100	930 500
<b>Outer Adelaide:</b>			
Barossa .....	22 650	25 400	26 650
Kangaroo Island .....	3 200	3 300	3 350
Onkaparinga .....	11 300	12 950	14 300
Fleurieu .....	15 500	17 950	20 200
Total Outer Adelaide .....	52 600	59 600	64 500
<b>Yorke and Lower North:</b>			
Yorke .....	20 600	20 950	21 950
Lower North .....	19 200	19 050	19 000
Total Yorke and Lower North .....	39 750	40 000	40 900
<b>Murray Lands:</b>			
Riverland .....	29 300	30 500	31 200
Murray Mallee .....	28 400	29 750	30 450
Total Murray Lands .....	57 650	60 250	61 650
<b>South East:</b>			
Upper South East .....	18 750	18 450	18 600
Lower South East .....	37 750	40 100	41 150
Total South East .....	56 450	58 550	59 750
<b>Eyre:</b>			
Lincoln .....	24 700	26 200	27 150
West Coast .....	6 200	6 700	7 150
Total Eyre .....	30 900	32 900	34 300
<b>Northern:</b>			
Whyalla .....	33 850	35 550	33 300
Pirie .....	33 050	32 250	32 150
Flinders Ranges .....	18 500	19 800	20 800
Far North .....	9 900	9 150	8 300
Total Northern .....	95 300	96 800	94 600
Total State (including migratory) .....	1 185 300	1 261 600	1 287 600

(a) The figures have been adjusted for census underenumeration.

### Statistical Districts

At the 1976 Census, around each urban centre of at least 25 000 persons, a further boundary (the statistical district boundary) was defined to contain the anticipated growth of the urban centre for a period of at least 20 years. This fixed boundary (as distinct from the urban boundary which is continuously moving) delimits an area which for general statistical purposes is free from the practical problems imposed by a moving boundary, but which nevertheless represents the town or city in a wider sense. In selected cases, statistical district boundaries were delineated around urban centres below 25 000 persons where existing local government area boundaries were clearly inadequate in indicating the extent of urban development.

The estimated population of statistical districts at 30 June 1971, 1976 and 1978 are shown in the following table.

**Estimated Population at 30 June, Statistical Districts, South Australia (a)**

Statistical District	At 30 June		
	1971	1976	1978
Mount Gambier .....	18 300	19 800	20 550
Murray Bridge .....	8 550	10 150	10 800
Port Augusta .....	13 200	14 500	15 350
Port Lincoln .....	9 500	10 400	10 850
Port Pirie .....	15 650	15 250	15 100
Whyalla .....	32 550	34 400	32 200

(a) Population figures have been adjusted for census underenumeration.

### Projections of the Population

Details of projections of population for South Australia may be found in the publication *Projections of the Population of South Australia* (Catalogue No. 3203.4).

### Further References

Additional information may be found in the following publications:

#### South Australian Office

3201.4 *Population and Dwellings in Local Government Areas*  
 3203.4 *Projections of the Population of South Australia*

#### Central Office

2204.0 *Characteristics of Population in Local Government Areas*

## 5.3 BIRTHS AND DEATHS

Compulsory registration of births and deaths was first provided in South Australia in 1842 when an Act 'for registering births, deaths and marriages in the Province of South Australia' was passed. Current legislation is contained in the Births, Deaths and Marriages Registration Act, 1966-1975 which came into operation on 1 January 1968. The administration of the Act is the responsibility of the Principal Registrar of Births, Deaths and Marriages. For registration purposes the State is divided into twenty-two registration districts each of which has a registry office in the charge of a District Registrar.

The Principal Registrar maintains a register of all live births and of all deaths registered in the State and each District Registrar maintains, in a register, duplicate copies of the registrations of births and deaths which occurred in the district under his jurisdiction. Up

to the end of 1967 separate registers were kept of still births, which were not included in the registration or statistics of either live births or of deaths. Compulsory registration of still births was introduced in South Australia in 1937.

The current legislation does not require the Principal Registrar to maintain a register of still births, but it provides for a 'Medical Certificate of Cause of Perinatal Death' to be filled in and forwarded to the Principal Registrar by the attending medical practitioner in respect of a 'child not born alive of at least twenty weeks gestation or four hundred grams weight'. The 'perinatal' certificates are also required from attending medical practitioners for children dying within twenty-eight days of birth.

The birth of each live-born child is required to be registered by a parent within sixty days of the date of birth. Registration of a live birth after the expiration of sixty days following the date of birth requires also the payment of a fee and a declaration in a form prescribed by the Act.

A death is required to be registered within fourteen days of the date of death by the occupier of the building or place in which the death occurred. Special provisions and penalties exist for the late registration of a death. A body may not be buried unless the undertaker is in possession of a 'Notice of signing of Medical Certificate of Cause of Death' signed by a medical practitioner or of an order by a coroner for burial, and the undertaker is required within seven days of the disposal of the body to notify the Principal Registrar of such disposal.

Births and deaths of Aboriginals when registered are incorporated in registers, but to the end of 1965 were excluded from statistics where there was definite indication that they were of full-blood. Statistics of births and deaths for 1966 and subsequent years cover all registrations.

In accordance with international practice, statistics for a period are on the basis of the births and deaths which were registered during that period. However, numbers registered in a period usually differ from the number of occurrences in the same period and, mainly because of the longer period allowed for registration, such variations generally are more apparent in birth than in death figures.

## BIRTHS

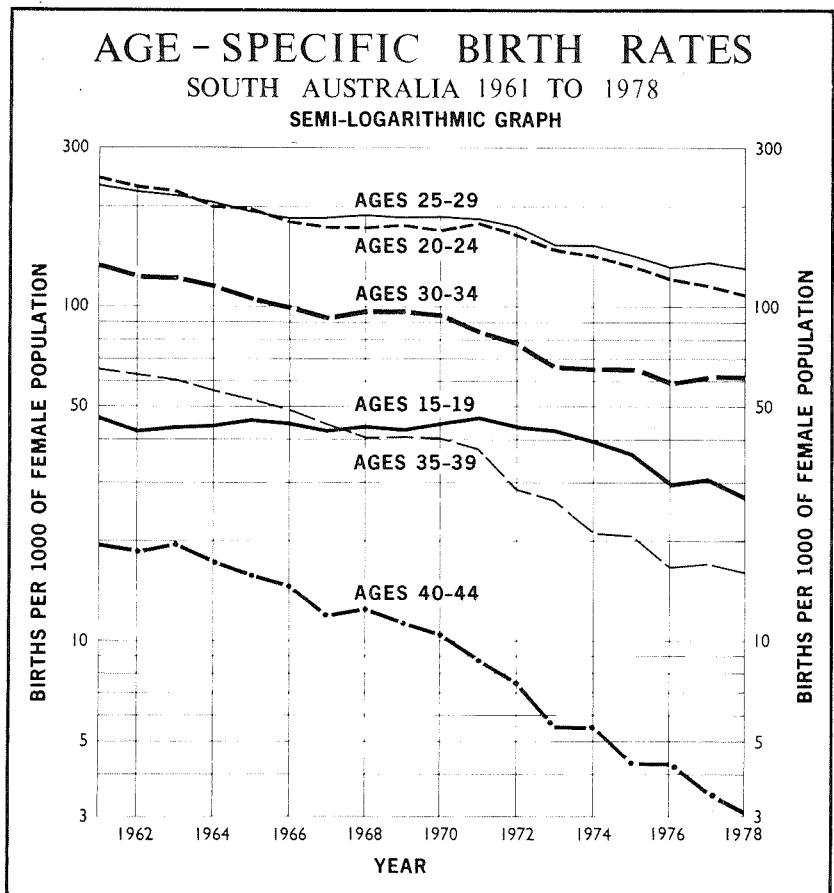
The South Australian birth rate per thousand of mean population during 1978 was 14.41 compared with the Australian rate of 15.73 per thousand. This was also the lowest rate recorded by any of the Australian States or Territories for the same period. The lowest ever recorded rate of 14.13 was established in 1935.

**Live Births Occurred and Registered, South Australia**

Year	Total Live Births Occurred (a)	Live Births Registered				
		Total	Rate (b)	Males	Females	Mascu- linity (c)
1973 .....	20 207	20 407	16.75	10 475	9 932	105.47
1974 .....	19 958	20 181	16.33	10 489	9 692	108.22
1975 .....	19 586	19 986	15.95	10 212	9 774	104.48
1976 .....	18 893	18 947	15.02	9 838	9 109	108.00
1977 .....	19 010	19 260	15.09	9 907	9 353	105.92
1978 .....	17 632	18 558	14.41	9 496	9 062	104.79

(a) Figures are subject to the addition of late registrations, particularly to 1978.

(b) Number per 1 000 of mean population. (c) Number of male births per 100 female births.



#### Age-specific Birth Rates

One significant feature of age-specific birth rates as shown in the following table is that whereas in 1961, females in the 20-24 years age group accounted for the highest number of births, this can now be attributed to those in the 25-29 years age group. Also, a general decline in the fertility of women of all ages is evident, and this is particularly marked in the older age groups. In accordance with this, total fertility has decreased, reflecting the tendency toward smaller families.

Age-specific Birth Rates and Total Fertility, South Australia<sup>(a)</sup>

Year	Age Group (Years)							Total Fertility
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Annual Rates								
1954 (b) .....	41.85	212.75	206.60	123.19	65.83	26.76	0.84	3.39
1961 (b) .....	46.66	246.12	235.33	135.45	65.04	19.54	1.48	3.75
1966 (b) .....	44.56	178.73	181.58	99.31	49.30	14.62	0.75	2.84
1971 (b) .....	46.70	179.03	186.66	82.68	37.14	8.69	0.55	2.71
1972 .....	43.89	164.12	174.75	76.28	28.26	7.54	0.52	2.48
1973 .....	42.72	147.34	154.14	65.16	26.10	5.46	0.58	2.21
1974 .....	39.78	139.79	150.07	64.16	20.93	5.52	0.22	2.10
1975 .....	36.15	135.54	146.27	63.71	20.14	4.37	0.34	2.03
1976 (b) .....	30.06	126.50	138.97	59.96	17.25	4.26	0.20	1.89
1977 .....	30.12	119.80	145.07	60.59	17.74	3.56	0.15	1.89
1978 .....	27.40	111.48	136.98	61.54	16.83	3.08	0.15	1.79

(a) Number of live births per 1 000 of female population in each age group. Excludes particulars of full-blood Aboriginals before 1966. (b) Census year.

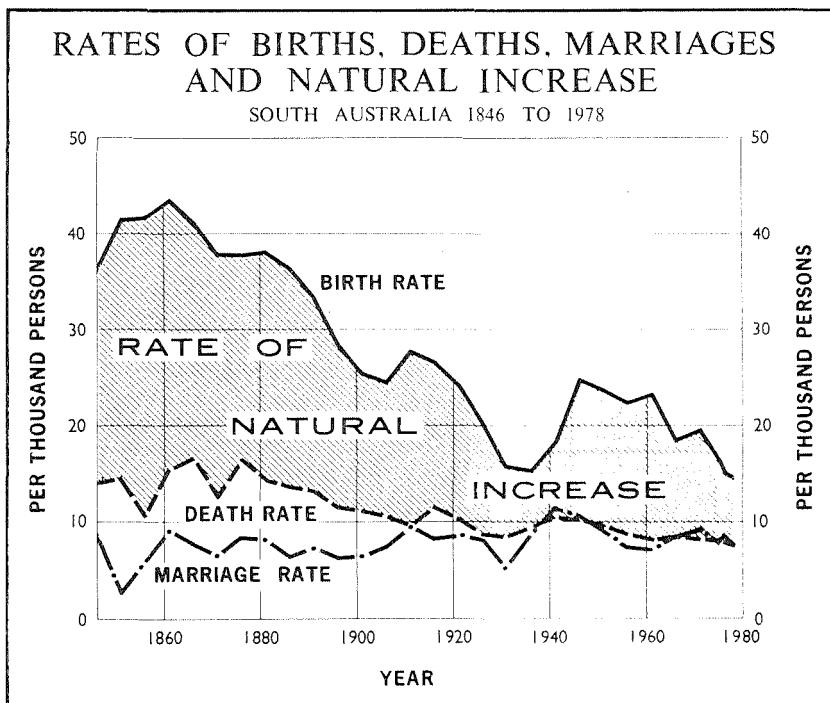
## Gross and Net Reproduction Rates

The gross reproduction rate is an indication of the number of live females that can be expected to be born to a woman through her child-bearing period. The net reproduction rate, which is a measure of the degree to which the population can replace itself, is derived from the gross reproduction rate by taking into account the females who fail to survive to the end of their child-bearing period. The following table indicates that the net reproduction rate has been steadily decreasing, reaching a level of 0.853 in 1978. This level is lower than the point at which women produce only one female child to take their place in the reproductive cycle and, excluding the impact of migration, if this trend continues, zero population growth will ultimately be reached. It should be realised, however, that these figures are not a forecast of what can be anticipated but only a hypothetical projection of what will happen if the given conditions upon which they have been based continue to apply.

Gross and Net Reproduction Rates, South Australia<sup>(a)</sup>

Year	Gross Reproduction Rate	Net Reproduction Rate	
		Rate	Mortality Experience on which Rate is Based
1961 (b) .....	1.841	1.781	1960 to 1962
1966 (b) .....	1.368	1.323	1965 to 1967
1971 (b) .....	1.318	1.281	
1972 .....	1.196	1.162	
1973 .....	1.075	1.044	1970 to 1972
1974 .....	1.009	0.981	
1975 .....	0.994	0.966	1975 to 1977
1976 (b) .....	0.907	0.886	
1977 .....	0.915	0.895	
1978 .....	0.873	0.853	

(a) Excludes particulars of full-blood Aboriginals before 1966. (b) Census year.



#### Ex-nuptial Births and Legitimations

Since 1960 there has been a marked increase in the number and rate of ex-nuptial births. For the previous forty years, the rate remained relatively steady at about three per hundred live births, but in recent years the rate has increased sharply, reaching a record level of 11.05 per hundred live births in 1978.

The legitimation of an ex-nuptial child upon the subsequent marriage of the parents which was first provided for in South Australia by the Legitimation Act, 1898, the provisions of which were later incorporated in the Births and Deaths Registration Act, was possible only if there was no legal impediment to the marriage of the parents at the time of the birth of the child.

The *Marriage Act* 1961, which came into operation on 1 September 1963, provides for the legitimation of a child upon the subsequent marriage of the parents whether or not there was a legal impediment to the marriage at the time of the birth of the child. Legitimations under this Act take place whether or not the child was living at the time of marriage, and the child is considered legitimate from the date of birth or, in the case of a child born before 1 September 1963, at that date.

## Ex-nuptial Live Births and Legitimations, South Australia

Year	Ex-nuptial Births			Legitimations
	Males	Females	Total	
1974 .....	988	891	1 879	9.31
1975 .....	1 025	918	1 943	9.72
1976 .....	906	883	1 789	9.44
1977 .....	959	937	1 896	9.84
1978 .....	1 038	1 012	2 050	11.05

## Confinements and Live Births

In the table below confinements in each of the years 1975 to 1978 have been shown in relation to age group of the mother and nuptiality.

## Confinements: Age Group of Mother and Nuptiality, South Australia

Age Group	Number of Confinements (a)				Percentage of Total in each Category			
	1975	1976	1977	1978	1975	1976	1977	1978
NUPTIAL CONFINEMENTS								
10-14 .....	—	—	—	—	—	—	—	—
15-19 .....	1 274	1 038	1 003	808	7.1	6.1	5.8	5.0
20-24 .....	6 469	6 062	5 835	5 363	36.2	35.7	33.9	32.9
25-29 .....	6 991	6 885	7 115	6 733	39.1	40.5	41.3	41.2
30-34 .....	2 357	2 313	2 560	2 748	13.2	13.6	14.9	16.8
35-39 .....	645	572	586	566	3.6	3.4	3.4	3.5
40-44 .....	125	122	104	100	0.7	0.7	0.6	0.6
45 and over .....	11	6	4	5	0.1	0.0	0.0	0.0
Not stated .....	—	2	3	—	—	0.0	0.0	—
Total .....	17 872	17 000	17 210	16 323	100.0	100.0	100.0	100.0
EX-NUPTIAL CONFINEMENTS								
10-14 .....	20	15	12	16	1.0	0.8	0.6	0.8
15-19 .....	777	700	757	796	40.4	39.4	40.3	39.2
20-24 .....	601	587	605	674	31.2	33.0	32.2	33.2
25-29 .....	307	288	292	344	15.9	16.2	15.5	17.0
30-34 .....	144	125	137	142	7.5	7.0	7.3	7.0
35-39 .....	57	48	60	53	2.9	2.7	3.2	2.6
40-44 .....	17	14	14	4	0.9	0.8	0.7	0.2
45 and over .....	1	1	1	—	0.1	0.1	0.1	—
Not stated .....	1	—	—	—	0.1	—	—	—
Total .....	1 925	1 778	1 878	2 029	100.0	100.0	100.0	100.0

(a) Includes only those confinements which resulted in one or more live births.

The next table shows the number of confinements and live births for 1977 and 1978 classified separately for single births and multiple births in which at least one issue was live-born. Multiple births registered in South Australia during 1978 comprised 206 cases of twins, 1 case of triplets and 1 of quads, representing an average of 11.3 multiple confinements per 1 000 confinements.

## Confinements and Live Births: Class of Birth, South Australia

Particulars	1977			1978				
	Confine- ments (a)	Live Births			Confine- ments (a)	Live Births		
		Male	Female	Total		Male	Female	Total
<b>Nuptial:</b>								
Single births .....	17 055	8 793	8 262	17 055	16 138	8 266	7 872	16 138
Twins .....	154	154	152	306	183	188	175	363
Triplets .....	1	1	2	3	1	—	3	3
Quads .....	—	—	—	—	1	4	—	4
Total nuptial .....	17 210	8 948	8 416	17 364	16 323	8 458	8 050	16 508
<b>Ex-nuptial:</b>								
Single births .....	1 860	945	915	1 860	2 006	1 011	995	2 006
Twins .....	18	14	22	36	23	27	17	44
Triplets .....	—	—	—	—	—	—	—	—
Total ex-nuptial .....	1 878	959	937	1 896	2 029	1 038	1 012	2 050
Total .....	19 088	9 907	9 353	19 260	18 352	9 496	9 062	18 558

(a) Includes only those confinements which resulted in one or more live births.

Nuptial confinements classified according to the relative age groups of the parents, and ex-nuptial confinements classified to the age group of the mother are shown for 1978 in the following table.

## Confinements: Relative Ages of Parents, South Australia, 1978 (a)

Age Group (Nuptial Births) (Years)	Age Group of Mother (Years)							Total
	Under 20	20-24	25-29	30-34	35-39	40-44	45 and over	
Under 20 .....	121	32	4	—	—	—	—	157
20-24 .....	557	2 041	272	14	3	1	—	2 888
25-29 .....	93	2 666	3 662	340	26	2	—	6 789
30-34 .....	23	515	2 343	1 528	103	12	—	4 524
35-39 .....	10	83	341	650	233	16	—	1 333
40-44 .....	3	13	70	150	118	32	—	386
45-49 .....	1	5	24	46	56	22	2	156
50 and over .....	—	6	15	20	27	15	3	86
Not stated .....	—	2	2	—	—	—	—	4
<b>Mothers:</b>								
Married .....	808	5 363	6 733	2 748	566	100	5	16 323
Unmarried .....	812	674	344	142	53	4	—	2 029
Total .....	1 620	6 037	7 077	2 890	619	104	5	18 352

(a) Includes only those confinements which resulted in one or more live births.

Between 1969 and 1978 the proportion of nuptial first live births rose from 38.6 to 41.5 per cent of total nuptial births registered. Over the same period the number of fourth or subsequent children born into existing marriages declined from 2 963 to 997, a fall from 14.5 to 6.0 per cent of total nuptial births registered. These figures reflect the decline in the average number of children born into the family unit.

The table which follows shows the number of confinements classified by duration of marriage and previous issue. Previous issue is the number of live-born children of the existing marriage born before the current confinement.

**Nuptial Confinements: Duration of Marriage and Previous Issue of Mother  
South Australia, 1978**

Duration of Marriage	Number of Confinements (a)	Previous Issue of Marriage					
		0	1	2	3	4	5
Under 1 year .....	1 421	1 327	81	11	1	1	—
1 year .....	1 694	1 397	274	20	3	—	—
2 years .....	1 905	1 225	652	21	6	—	1
3 years .....	2 066	968	983	105	9	—	—
4 years .....	2 081	746	1 112	199	19	3	1
5 years .....	1 895	529	961	347	50	5	—
6 years .....	1 449	286	726	366	59	8	2
7 years .....	1 174	173	501	410	80	7	1
8 years .....	870	89	304	367	93	12	3
9 years .....	576	49	156	241	99	25	4
10 years .....	351	25	73	161	64	19	5
11 years .....	236	13	44	92	61	20	3
12 years .....	177	12	31	56	48	22	5
13 years .....	120	7	17	46	24	18	4
14 years .....	96	4	14	24	23	16	9
15 years and over .....	212	8	21	45	55	40	19
Total .....	16 323	6 858	5 950	2 511	694	196	57
							50

(a) Includes previous issue not stated.

**Nuptial First Live Births: Duration of Marriage of Parents, South Australia**

Duration of Marriage	Nuptial First Live Births				Percentage of Total			
	1975	1976	1977	1978	1975	1976	1977	1978
Under 5 months ....	500	471	452	440	6.57	6.60	6.25	6.42
5 months .....	308	212	263	226	4.05	2.97	3.64	3.30
6 months .....	243	178	179	144	3.20	2.50	2.47	2.10
7 months .....	98	77	101	59	1.29	1.08	1.40	0.86
8 months .....	92	91	91	98	1.21	1.28	1.26	1.43
9 months .....	141	135	155	131	1.85	1.89	2.14	1.91
10 months .....	160	135	146	109	2.10	1.89	2.02	1.59
11 months .....	149	128	153	120	1.96	1.79	2.11	1.75
Total under 1 year	1 691	1 427	1 540	1 327	22.23	20.00	21.29	19.35
1 year .....	1 750	1 483	1 426	1 397	23.01	20.79	19.71	20.37
2 years .....	1 427	1 323	1 240	1 225	18.76	18.55	17.14	17.86
3 years .....	1 151	1 066	1 091	968	15.13	14.94	15.08	14.11
4 years .....	683	808	799	746	8.98	11.33	11.04	10.88
5 years .....	413	463	496	529	5.43	6.49	6.86	7.71
6 years .....	214	246	261	286	2.81	3.45	3.61	4.17
7 years .....	122	137	170	173	1.60	1.92	2.35	2.52
8 years and over ....	154	178	210	207	2.02	2.50	2.90	3.02
Not stated .....	1	2	2	—	0.01	0.03	0.03	—
Total .....	7 606	7 133	7 235	6 858	100.00	100.00	100.00	100.00

The previous table illustrates a trend, which has been apparent since 1964, towards a longer period after marriage before the birth of the first child. In particular, there has been a decrease in the percentage of nuptial first live births to women who had been married less than two years, from 60.6 per cent in 1969 to 39.7 per cent in 1978. A

corresponding increase is evident in the two to four years duration of marriage groups; from 32.27 per cent to 42.85 per cent and from 7.18 per cent to 17.42 per cent in the five years and over group.

### DEATHS

The 9 763 deaths registered in South Australia during 1978 represented a crude death rate of 7.58 per thousand of mean population, the lowest yet recorded in this State. Although crude death rates in excess of 16.0 were recorded in the 1860s, the rate has not exceeded 9.0 since 1956. Other fluctuations in the number of deaths and the crude death rate over time can be seen in the Statistical Summary, Appendix A.

#### Deaths: Numbers Registered and Rates, South Australia

Year	Number Registered			Crude Death Rate (a)		
	Males	Females	Persons	Males	Females	Persons
1974 .....	5 728	4 508	10 236	9.28	7.29	8.29
1975 .....	5 466	4 481	9 947	8.74	7.14	7.94
1976 .....	5 462	4 537	9 999	8.67	7.18	7.92
1977 .....	5 317	4 467	9 784	8.34	6.99	7.66
1978 .....	5 475	4 288	9 763	8.52	6.65	7.58

(a) Number of deaths per 1 000 of estimated mean population.

#### Deaths: Numbers Registered in Age Groups, South Australia

Age Group	Males			Females			Persons		
	1976	1977	1978	1976	1977	1978	1976	1977	1978
Under 1 year .....	165	113	138	111	108	89	276	221	227
1 year .....	13	10	9	5	6	6	18	16	15
2 years .....	8	5	9	7	4	—	15	9	9
3 years .....	2	5	10	6	4	—	8	9	10
4 years .....	4	8	2	1	3	6	5	11	8
Total under 5 years ...	192	141	168	130	125	101	322	266	269
5-9 years .....	22	18	16	13	27	5	35	45	21
10-14 years .....	23	21	17	12	10	13	35	31	30
15-19 years .....	78	93	91	31	36	29	109	129	120
20-24 years .....	91	86	89	23	29	24	114	115	113
25-29 years .....	53	81	63	22	19	25	75	100	88
30-34 years .....	51	48	60	29	29	22	80	77	82
35-39 years .....	59	68	65	34	32	33	92	100	98
40-44 years .....	97	77	90	61	54	46	158	131	136
45-49 years .....	198	187	173	80	97	69	278	284	242
50-54 years .....	305	273	256	151	158	151	456	431	407
55-59 years .....	395	429	399	213	177	191	608	606	590
60-64 years .....	594	583	573	301	282	261	895	865	834
65-69 years .....	728	700	777	402	390	358	1 130	1 090	1 135
70-74 years .....	735	743	790	482	528	515	1 217	1 271	1 305
75-79 years .....	685	714	739	701	664	605	1 386	1 378	1 344
80-84 years .....	602	528	551	761	735	699	1 363	1 263	1 250
85-89 years .....	380	372	378	668	658	704	1 048	1 030	1 082
90-94 years .....	142	126	147	328	324	325	470	450	472
95 years and over ....	32	29	33	95	93	112	127	122	145
All ages .....	5 462	5 317	5 475	4 537	4 467	4 288	9 999	9 784	9 763

A long established trend of increases in the number of deaths at the higher ages has been offset to some degree by a decrease in those in the younger age groups. The effect of this trend related to the changes in age distribution of the population is illustrated in

the next tables, which show age-specific death rates, *i.e.* deaths in each age group expressed as a rate per 1 000 of the population in that age group. Because age constitution of the population is known accurately only at censuses, the periods shown are those with a census date as their centre.

#### Age-specific Death Rates: Males, South Australia <sup>(a)</sup>

Age Group (Years)	Death Rate (b)							
	1920-22	1932-34	1946-48	1953-55	1960-62	1965-67	1970-72	1975-77
0-4 .....	19.98	9.90	8.09	6.41	5.82	4.58	4.66	3.19
5-9 .....	2.33	1.18	1.00	0.52	0.50	0.44	0.43	0.36
10-14 .....	1.55	1.08	0.68	0.65	0.46	0.55	0.38	0.36
15-19 .....	2.41	1.69	1.42	1.50	1.08	1.19	1.48	1.52
20-24 .....	3.47	2.35	1.44	1.88	1.37	1.33	1.55	1.57
25-29 .....	3.67	2.51	1.59	1.70	1.59	1.34	1.12	1.29
30-34 .....	3.97	2.51	1.88	1.57	1.62	1.13	1.41	1.24
35-39 .....	5.12	3.23	2.41	2.29	2.08	2.23	2.04	1.73
40-44 .....	6.10	4.73	3.63	3.56	3.43	3.27	3.15	2.62
45-49 .....	8.37	6.82	6.12	5.48	5.44	5.71	5.49	5.09
50-54 .....	11.58	9.82	10.74	10.16	9.24	9.59	9.37	8.27
55-59 .....	18.99	15.11	16.28	15.71	15.75	15.92	16.01	13.35
60-64 .....	26.02	24.98	26.08	24.33	24.39	26.69	25.10	22.57
65-69 .....	41.62	36.14	40.08	39.31	37.84	40.55	41.00	36.55
70-74 .....	62.49	57.07	60.79	62.59	59.47	63.86	64.42	55.42
75-79 .....	105.50	92.60	97.69	94.55	88.56	90.71	96.09	86.26
80-84 .....	158.90	147.86	145.56	141.64	135.85	138.50	142.39	136.02
85 and over .....	269.50	257.03	248.89	235.84	227.39	228.91	230.02	233.90
All ages .....	10.75	9.29	10.87	9.80	9.00	9.17	9.31	8.58

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

(b) Average annual number of deaths per 1 000 population at ages shown.

#### Age-specific Death Rates: Females, South Australia <sup>(a)</sup>

Age Group (Years)	Death Rate (b)							
	1920-22	1932-34	1946-48	1953-55	1960-62	1965-67	1970-72	1975-77
0-4 .....	16.29	8.29	7.12	5.01	3.93	3.47	3.39	2.50
5-9 .....	2.30	1.04	0.54	0.45	0.35	0.33	0.32	0.35
10-14 .....	1.32	0.88	0.38	0.42	0.30	0.29	0.29	0.21
15-19 .....	2.71	1.25	0.75	0.52	0.37	0.44	0.65	0.56
20-24 .....	2.91	2.36	1.04	0.63	0.58	0.46	0.48	0.44
25-29 .....	3.95	2.73	1.65	0.85	0.70	0.53	0.60	0.42
30-34 .....	4.18	2.66	1.91	0.99	0.96	0.87	0.91	0.67
35-39 .....	5.27	3.85	2.03	1.79	1.33	1.14	1.18	0.90
40-44 .....	4.99	4.10	3.48	2.56	1.80	2.13	1.86	1.84
45-49 .....	6.42	5.80	4.59	3.65	3.03	3.29	2.95	2.77
50-54 .....	9.18	8.06	7.09	5.88	5.22	4.99	4.60	4.39
55-59 .....	10.65	11.24	10.33	9.04	7.82	7.59	7.41	6.73
60-64 .....	18.07	17.68	14.97	14.06	12.74	12.82	12.16	10.67
65-69 .....	33.15	27.16	25.22	23.01	21.05	20.39	20.32	16.92
70-74 .....	46.20	42.19	42.17	40.35	35.52	35.36	33.42	29.24
75-79 .....	83.56	75.53	72.07	72.20	58.28	60.81	57.60	52.12
80-84 .....	131.63	121.15	121.57	109.92	108.61	100.52	99.42	86.30
85 and over .....	232.84	233.59	214.35	215.80	199.38	183.88	186.55	186.61
All ages .....	9.00	8.23	9.19	8.31	7.38	7.42	7.50	7.10

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

(b) Average annual number of deaths per 1 000 population at ages shown.

#### CAUSES OF DEATH

The classification of causes of deaths in Australia since 1907 has been based on the International Lists of Causes of Deaths (ICD). From time to time revisions to these lists have affected the comparability of the figures. Up to 1949 the effect of these revisions had been negligible but the introduction in 1950 of the Sixth Revision of the ICD

introduced major changes which, together with the adoption of more flexible rules for selecting the underlying cause where certificates of cause of death showed more than one cause, affected the comparability of figures for years before 1950 with those for 1950 and later. A complete classification of causes of deaths for each State and Territory of Australia for 1950 according to both the Fifth and Sixth Revisions was published by the Australian Statistician in *Demography* 1950, Bulletin No. 68. The Seventh Revision adopted in Australia in 1958 did not affect comparability significantly.

The Eighth Revision, brought into use in Australia in 1968, provided a few changes to the structure of the tabular list, e.g. the transferring of cerebrovascular diseases from the section covering diseases of the nervous system and sense organs to that covering diseases of the circulatory system.

Comparability has not been affected greatly by the changes with the exception of the categories within the section now entitled 'Certain Causes of Perinatal Morbidity and Mortality'—the Seventh Revision title was 'Certain Diseases of Early Infancy'. Seventh Revision classification in this section was related to the condition in the infant whereas the Eighth Revision provides primarily for classification wherever possible to maternal diseases or conditions or to the circumstances of the birth rather than to the resultant condition in the infant. ICD Eighth Revision code numbers have been shown where appropriate in the tables which follow.

In the following table, deaths registered in 1978 are shown classified according to the abbreviated list of the Eighth Revision together with the percentages from each cause and the rate per 10 000 of mean population.

Causes of Death: South Australia, 1978

Abbreviated Classification (a)	ICD Code Number	Number of Deaths	Proportion of Total	Rate per 10 000 of Mean Population
4 Enteritis and other diarrhoeal diseases .....	008.009	9	0·1	0·1
5 Tuberculosis of respiratory system .....	010-012	1	—	—
6 Other tuberculosis including late effects .....	013-019	1	—	—
11 Meningococcal infection .....	036	1	—	—
14 Measles .....	055	1	—	—
18 Other infective and parasitic diseases .....	{ Remainder } 000-136	10	0·1	0·1
19 Malignant neoplasms .....	140-209	1 988	20·4	15·4
20 Benign and unspecified neoplasms .....	210-239	17	0·2	0·1
21 Diabetes mellitus .....	250	177	1·8	1·4
22 Avitaminoses and other nutritional deficiency .....	260-269	10	0·1	0·1
23 Anaemias .....	280-285	7	0·1	0·1
24 Meningitis .....	320	5	0·1	—
26 Chronic rheumatic heart disease .....	393-398	87	0·9	0·7
27 Hypertensive disease .....	400-404	89	0·9	0·7
28 Ischaemic heart disease .....	410-414	3 059	31·3	23·8
29 Other forms of heart disease .....	420-429	449	4·6	3·5
30 Cerebrovascular disease .....	430-438	1 292	13·2	10·0
31 Influenza .....	470-474	10	0·1	0·1
32 Pneumonia .....	480-486	214	2·2	1·7
33 Bronchitis, emphysema and asthma .....	490-493	336	3·4	2·6
34 Peptic ulcer .....	531-533	48	0·5	0·4
35 Appendicitis .....	540-543	5	0·1	—
36 Intestinal obstruction and hernia .....	550-553, 560	34	0·3	0·3
37 Cirrhosis of liver .....	571	100	1·0	0·8
38 Nephritis and nephrosis .....	580-584	57	0·6	0·4
39 Hyperplasia of prostate .....	600	8	0·1	0·1
42 Congenital anomalies .....	740-759	91	0·9	0·7
43 Birth injury, difficult labour and other anoxic and hypoxic conditions .....	{ 764-768, } 772,776,	23	0·2	0·2

## Causes of Death: South Australia, 1978 (continued)

Abbreviated Classification(a)	ICD Code Number	Number of Deaths	Proportion of Total	Rate per 10 000 of Mean Population
Per cent				
44 Other causes of perinatal mortality .....	{ 760-763, 769-771, 773-775, 777-779 }	59	0.6	0.5
45 Symptoms and ill-defined conditions .....	780-796	101	1.0	0.8
46 All other diseases .....	Residual	774	7.9	6.0
47 Motor vehicle accidents .....	E810-E823	303	3.1	2.4
48 All other accidents .....	{ E800-E807, E825-E949 }	211	2.2	1.6
49 Suicide and intentional self-inflicted injuries .....	E950-E959	155	1.6	1.2
50 All other external causes .....	E960-E999	31	0.3	0.2
Total all causes .....	..	9 763	100.0	75.8

(a) No deaths were recorded in 1978 in the following categories: 1 Cholera (000), 2 Typhoid fever (001), 3 Bacillary dysentery and amoebiasis (004, 006), 7 Plague (020), 8 Diphtheria (032), 9 Whooping Cough (033), 10 Streptococcal throat and scarlet fever (034), 12 Acute poliomyelitis (040-043), 13 Smallpox (050), 15 Typhus and other rickettsioses (080-083), 16 Malaria (084), 17 Syphilis and its sequelae (090-097), 25 Active rheumatic fever (390-392), 40 & 41 Complications of pregnancy, childbirth and puerperium (630-678).

## Main Causes of Death: Age Groups, South Australia, 1978

International Classification Number	Age Group and Cause of Death	Deaths	Proportion of Total Deaths in Age Groups	Proportion of Total Deaths from the Specified Cause
0-4 Years				
740-759	Congenital anomalies .....	No. 72	% 26.8	% 79.1
760-779	Certain causes of perinatal morbidity and mortality .....	82	30.5	100.0
780-796	Symptoms and ill-defined conditions .....	59	21.9	38.4
E800-E999	Accidents, poisonings, violence .....	29	10.8	4.1
	Other causes .....	27	10.0	..
5-14 Years				
140-209	Malignant neoplasms .....	8	15.7	0.4
E800-E999	Accidents, poisonings, violence .....	29	56.9	4.1
	Other causes .....	14	27.4	..
15-24 Years				
140-209	Malignant neoplasms .....	13	5.6	0.7
E800-E999	Accidents, poisonings, violence .....	186	79.8	26.6
	Other causes .....	34	14.6	..
25-34 Years				
140-209	Malignant neoplasms .....	36	21.2	1.8
E800-E999	Accidents, poisonings, violence .....	99	58.2	14.1
	Other causes .....	35	20.6	..
35-44 Years				
140-209	Malignant neoplasms .....	60	25.6	3.0
393-398, 410-429	Heart disease .....	41	17.5	1.1
430-438	Cerebrovascular disease .....	20	8.5	1.5
E800-E999	Accidents, poisonings, violence .....	73	31.2	10.4
	Other causes .....	40	17.1	..
45-54 Years				
140-209	Malignant neoplasms .....	223	34.4	11.2
393-398, 410-429	Heart disease .....	195	30.0	5.4
430-438	Cerebrovascular disease .....	40	6.2	3.1
E800-E999	Accidents, poisonings, violence .....	61	9.4	8.7
	Other causes .....	130	20.0	..
55-64 Years				
140-209	Malignant neoplasms .....	432	30.3	21.7
393-398, 410-429	Heart disease .....	572	40.2	15.9
430-438	Cerebrovascular disease .....	99	7.0	7.7
E800-E999	Accidents, poisonings, violence .....	74	5.2	10.6
	Other causes .....	247	17.3	..

## Main Causes of Death: Age Groups, South Australia, 1978 (continued)

International Classification Number	Age Group and Cause of Death	Deaths	Pro-	Pro-
			portion of Total Deaths in Age Groups	portion of Total Deaths from the Specified Cause
65-74 Years				
140-209	Malignant neoplasms .....	627	25.7	31.5
250	Diabetes mellitus .....	64	2.6	36.2
393-398, 410-429	Heart disease .....	982	40.2	27.3
430-438	Cerebrovascular disease .....	320	13.1	24.8
440-448	Diseases of arteries, arterioles and capillaries .....	69	2.8	19.9
490-493	Bronchitis, emphysema, asthma .....	114	4.7	33.9
E800-E999	Accidents, poisonings, violence .....	60	2.5	8.6
	Other causes .....	204	8.4	..
75 Years and Over				
140-209	Malignant neoplasms .....	582	13.5	29.3
250	Diabetes mellitus .....	77	1.8	43.5
393-398, 410-429	Heart disease .....	1 784	41.6	49.6
430-438	Cerebrovascular disease .....	803	18.7	62.2
440-448	Diseases of arteries, arterioles and capillaries .....	237	5.5	68.5
490-493	Bronchitis, emphysema, asthma .....	159	3.7	47.3
E800-E999	Accidents, poisonings, violence .....	89	2.1	12.7
	Other causes .....	562	13.1	..

The long-term trends in deaths and death rates from some of the main causes are discussed in the following pages. One of the factors affecting these trends has been the reduction of mortality in early childhood. This improvement has increased the number of persons reaching higher ages where the risk from degenerative diseases is greatest; consequently deaths from degenerative diseases now constitute a higher proportion of deaths than formerly.

## Infectious Diseases

In 1956 a poliomyelitis immunisation program began and since then the incidence of and deaths from this disease have declined (see Part 6.5).

There has been a long-term downward trend in deaths from respiratory tuberculosis. This has been assisted by the introduction in March 1952 of compulsory chest X-ray surveys of the population, enabling early detection and therefore more effective treatment of the disease.

Deaths from certain infectious diseases over the period 1915 to 1978 are shown in the following table.

## Deaths from Certain Infectious Diseases, South Australia (a)

Period	Respiratory Tuberculosis (010-012)	Typhoid Fever (001)	Scarlet Fever (034-1)	Diphtheria (032)	Whooping Cough (033)	Acute Polio- myelitis (040-043)	Measles (055)
<i>Annual Average:</i>							
1915-19 .....	339	311	4	94	21	(b)	14
1920-24 .....	330	28	9	70	28	9	7
1925-29 .....	313	12	2	25	13	3	12
1930-34 .....	261	7	2	12	13	3	6
1935-39 .....	211	4	1	27	11	6	2
1940-44 .....	190	3	2	30	10	2	9
1945-49 .....	161	1	1	7	8	9	6
1950-54 .....	81	—	—	1	2	23	3
1955-59 .....	43	—	—	1	1	2	3
1960-64 .....	32	—	—	—	1	1	2
1965-69 .....	20	—	—	—	—	—	2
1970-74 .....	8	—	—	—	—	—	—

Deaths from Certain Infectious Diseases, South Australia <sup>(a)</sup> (continued)

Period	Respiratory Tuberculosis (010-012)	Typhoid Fever (001)	Scarlet Fever (034-1)	Diphtheria (032)	Whooping Cough (033)	Acute Polio- myelitis (040-043)	Measles (055)
<b>Year:</b>							
1975 .....	4	—	—	—	—	—	—
1976 .....	3	—	—	—	—	—	1
1977 .....	2	—	—	—	—	—	—
1978 .....	1	—	—	—	—	—	1

(a) Deaths of full-blood Aboriginals where identified in registrations were excluded before 1966.

(b) Not separately recorded.

## Malignant Neoplasms

For 1950 and subsequent years, deaths from malignant neoplasms (generally known as 'cancer') have included those deaths classified to neoplasms of lymphatic and haemato-poietic tissues (ICD 200-209). This latter group, which accounted for 226 of the 1 988 deaths attributed to malignant neoplasms in 1978, includes such diseases as lymphosarcoma, Hodgkin's disease, leukaemia and multiple myeloma.

The following table shows deaths from malignant neoplasms according to site of the disease for selected years.

Malignant Neoplasms: Deaths, Site of Disease, South Australia <sup>(a)</sup>

Site of Disease	1960	1965	1970	1975	1978	Number
Malignant neoplasm of:						
Buccal cavity and pharynx (140-9) ....	21	20	35	33	33	
Digestive organs and peritoneum (150-9) .....	425	479	546	583	625	
Respiratory system (160-3) .....	130	201	291	381	424	
Skin (172, 173) .....	28	34	44	48	58	
Breast (174) .....	120	107	146	171	132	
Uterus (180-2) .....	66	61	52	55	53	
Other female genital organs (183, 184) .....	39	47	63	61	54	
Male genital organs (185-7) .....	74	84	110	142	117	
Urinary organs (188, 189) .....	67	88	79	88	83	
Brain and nervous system (191, 192) .....	32	50	43	54	55	
Other and unspecified sites (170, 171, 190, 193-9) .....	48	84	83	107	128	
Neoplasms of lymphatic and haemopoietic tissue (200-9) .....	97	128	160	187	226	
Total deaths (140-209) .....	1 147	1 383	1 652	1 910	1 988	
Buccal cavity and pharynx (140-9) ....	0.22	0.19	0.30	0.27	0.26	
Digestive organs and peritoneum (150-9) .....	4.50	4.50	4.72	4.71	4.85	
Respiratory system (160-3) .....	1.38	1.89	2.51	3.08	3.29	
Skin (172, 173) .....	0.30	0.32	0.38	0.39	0.45	
Breast (174) .....	1.27	1.01	1.26	1.38	1.03	
Uterus (180-2) .....	0.70	0.57	0.45	0.44	0.41	

**Malignant Neoplasms: Deaths, Site of Disease, South Australia<sup>(a)</sup> (continued)**

Site of Disease	1960	1965	1970	1975	1978
Rate (b)					
Malignant neoplasm of:					
Other female genital organs (183, 184) .....	0.41	0.44	0.54	0.49	0.42
Male genital organs (185-7) .....	0.78	0.79	0.95	1.15	0.91
Urinary organs (188, 189) .....	0.71	0.83	0.68	0.71	0.64
Brain and nervous system (191, 192) Other and unspecified sites (170, 171, 190, 193-9) .....	0.34	0.47	0.37	0.44	0.43
Neoplasms of lymphatic and haematopoietic tissue (200-9) .....	0.51	0.79	0.72	0.86	0.99
Total rate (140-209) .....	1.03	1.20	1.38	1.51	1.76
	12.14	13.00	14.26	15.43	15.44

(a) Deaths of full-blood Aboriginals where identified in registrations were excluded before 1966.

(b) Per 10 000 of mean population.

**Malignant Neoplasms: Age-specific Death Rates, South Australia<sup>(a)</sup>**

Age Group (Years)	Death Rate (b)						
	1932-34	1946-48	1953-55	1960-62	1965-67	1970-72	1975-77
MALES							
0-4 .....	—	0.49	1.18	1.02	1.14	1.27	0.88
5-14 .....	0.12	0.51	1.05	0.82	0.97	0.79	0.45
15-24 .....	0.31	0.07	1.64	0.86	0.90	0.90	0.85
25-34 .....	1.05	1.18	1.21	1.33	1.62	1.24	1.79
35-44 .....	3.36	2.57	4.63	4.29	3.72	5.36	3.69
45-54 .....	8.65	12.35	10.42	11.57	15.09	14.80	14.48
55-64 .....	35.41	32.77	33.43	36.52	43.46	43.94	42.23
65-74 .....	89.18	82.62	69.54	83.67	87.28	101.64	101.49
75 and over ....	147.57	148.98	149.45	142.29	151.06	175.14	196.61
All ages ....	11.40	13.60	12.54	12.86	14.09	15.69	16.45
FEMALES							
0-4 .....	0.30	0.41	1.24	0.79	0.57	0.57	0.13
5-14 .....	0.13	0.23	0.34	0.79	0.55	0.38	0.51
15-24 .....	0.25	0.40	0.72	0.46	0.82	0.56	0.45
25-34 .....	1.49	1.74	1.99	2.16	1.70	2.39	1.46
35-44 .....	6.32	4.42	5.95	6.66	5.68	4.88	5.27
45-54 .....	16.86	15.39	12.67	16.69	16.14	15.83	14.26
55-64 .....	34.61	30.12	32.91	28.19	30.33	30.90	30.06
65-74 .....	55.98	57.21	52.26	52.24	49.90	55.38	51.11
75 and over ....	115.15	108.52	98.41	99.76	94.61	102.54	112.27
All ages ....	11.37	13.12	12.64	12.68	12.30	13.13	13.44

(a) Deaths of full-blood Aboriginals where identified in registrations were excluded before 1966.

(b) Average annual number of deaths per 10 000 of population at ages shown.

The next table indicates a general increase in deaths from malignant neoplasms up to 1978 and the preceding table of age-specific death rates shows how the rate has increased for older age groups. Therefore, it appears that the increase over the period in the all ages rate is attributable in part to the increasing proportion of the population in the higher age groups.

Deaths from Malignant Neoplasms (140-209), South Australia<sup>(a)</sup>

Period	Number of Deaths			Death Rate (b)		
	Males	Females	Persons	Males	Females	Persons
<b>Annual Average:</b>						
1950-54 .....	462	483	945	12.11	12.96	12.53
1955-59 .....	565	519	1'084	12.79	12.06	12.43
1960-64 .....	656	617	1 273	13.16	12.58	12.88
1965-69 .....	820	698	1 518	14.77	12.67	13.72
1970-74 .....	958	784	1 742	15.94	13.06	14.50
<b>Year:</b>						
1974 .....	1 055	785	1 840	17.10	12.69	14.89
1975 .....	1 052	858	1 910	16.82	13.68	15.43
1976 .....	994	837	1 831	15.77	13.25	14.51
1977 .....	1 066	855	1 921	16.72	13.37	15.05
1978 .....	1 184	804	1 988	18.43	12.46	15.44

(a) Deaths of full-blood Aboriginals where identified in registrations were excluded before 1966.

(b) Number of deaths per 10 000 of mean population.

### Cerebrovascular Disease

The increase in both numbers and rates of deaths from cerebrovascular disease (commonly referred to as 'a stroke') is further evidence of the effect of the increased proportion of the population at higher ages.

Deaths from Cerebrovascular Disease (430-438), South Australia<sup>(a)</sup>

Period	Number of Deaths			Death Rate (b)		
	Males	Females	Persons	Males	Females	Persons
<b>Annual Average:</b>						
1930-34 .....	201	231	432	6.94	8.01	7.47
1935-39 .....	231	294	525	7.84	9.95	8.90
1940-44 .....	271	368	639	8.96	12.03	10.51
1945-49 .....	321	431	752	9.92	13.21	11.57
1950-54 .....	404	553	957	10.62	14.82	12.70
1955-59 .....	481	614	1 095	10.89	14.27	12.55
1960-64 .....	490	645	1 135	9.83	13.16	11.48
1965-69 .....	567	731	1 298	10.21	13.26	11.73
1970-74 .....	582	808	1 390	9.72	13.46	11.59
<b>Year:</b>						
1974 .....	550	817	1 367	8.91	13.21	11.06
1975 .....	570	834	1 404	9.11	13.29	11.21
1976 .....	566	799	1 365	8.98	12.65	10.82
1977 .....	561	776	1 337	8.88	12.12	10.47
1978 .....	541	751	1 292	8.42	11.64	10.03

(a) Deaths of full-blood Aboriginals where identified in registrations were excluded before 1966.

(b) Number of deaths per 10 000 of mean population.

Although the rate generally has fallen since 1954, deaths from this cause still constituted 18.7 per cent of deaths of persons aged seventy-five years and over in 1978. During the period 1930-34 deaths classified to this cause were only 8.6 per cent of all deaths, but during 1970-74 they were 14.0 per cent of all deaths.

### Diseases of the Heart

The following table shows the number of deaths attributed to heart disease and rates per 10 000 of the mean population since 1940.

The percentage of total deaths classified to heart disease increased from 25.5 per cent in the period 1940-44 to 36.1 per cent during 1970-74. Over the same period the rate per 10 000 of mean population increased from 26.1 to 29.9. Apart from the effect of the ageing population, there are other difficult-to-measure factors which have influenced this large increase, namely changes in the mode of certification and classification, and improvement both in diagnosis and certification; therefore any comparison of numbers, rates and percentages of deaths from this cause over the period should be made only with caution.

**Deaths from Diseases of the Heart (393-398, 410-429), South Australia<sup>(a)</sup>**

Period	Number of Deaths			Death Rate (b)		
	Males	Females	Persons	Males	Females	Persons
<b>Annual Average:</b>						
1940-44 .....	886	704	1 590	29.29	23.02	26.14
1945-49 .....	1 094	822	1 916	33.84	25.15	29.47
1950-54 .....	1 342	996	2 338	35.22	26.70	31.01
1955-59 .....	1 519	1 111	2 630	34.38	25.81	30.15
1960-64 .....	1 776	1 245	3 021	35.61	25.42	30.56
1965-69 .....	2 036	1 432	3 468	36.69	25.97	31.35
1970-74 .....	2 080	1 503	3 583	34.70	25.02	29.85
<b>Year:</b>						
1974 .....	2 108	1 555	3 663	34.16	25.14	29.65
1975 .....	2 034	1 531	3 565	32.52	24.40	28.46
1976 .....	2 080	1 589	3 669	33.01	25.16	29.08
1977 .....	2 017	1 552	3 569	31.62	24.28	27.96
1978 .....	2 034	1 561	3 595	31.65	24.20	27.92

(a) Deaths of full-blood Aboriginals where identified in registrations were excluded before 1966.

(b) Number of deaths per 10 000 of mean population.

### External Causes

In the table which follows, deaths from selected categories of external cause (accidents, poisonings and violence) are shown for recent years.

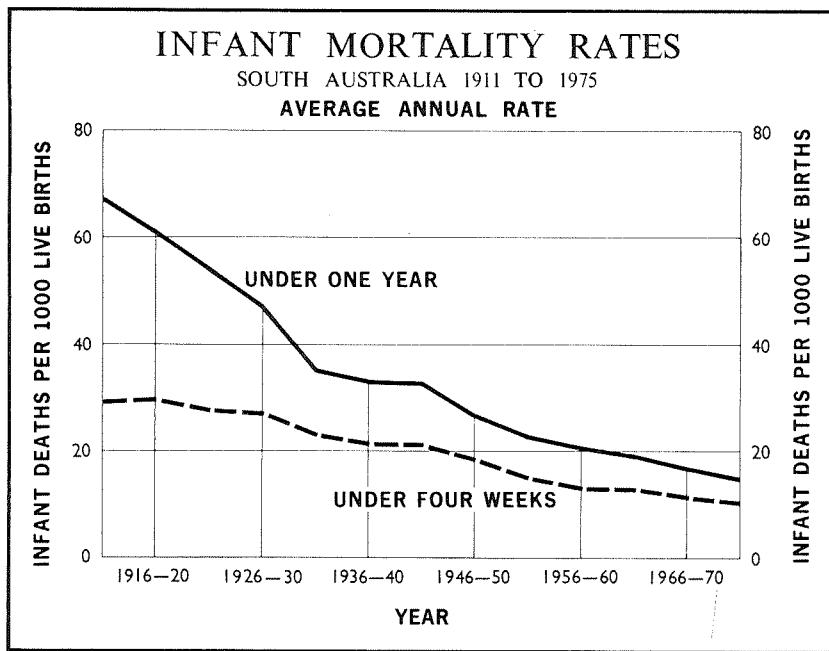
## Deaths: External Causes (Accidents, Poisonings and Violence), South Australia

Year	Cause							Total Deaths for Causes (E800-E999)
	Motor Vehicle Traffic Accidents (E810-E819)	Accidental Drownings (E830, E832, E910)	Accidental Poisonings (E850-E877)	Accidental Falls (E880-E887)	Suicide and (Intentional) Self-inflicted Injury (E950-E959)	Homicide and Injury Purposefully Inflicted (E960-E969)	Other External Causes (Balance E800-E999)	
MALES								
1974 .....	298	23	4	42	95	9	85	556
1975 .....	249	41	3	48	103	9	77	530
1976 .....	222	28	9	36	105	8	69	477
1977 .....	232	20	4	37	101	16	73	483
1978 .....	218	25	12	26	116	16	89	502
FEMALES								
1974 .....	86	7	2	61	39	14	26	235
1975 .....	82	5	2	59	46	9	34	237
1976 .....	74	13	1	48	41	14	27	218
1977 .....	96	9	2	54	28	8	29	226
1978 .....	79	3	3	40	39	11	23	198

## Deaths: External Causes (Accidents, Poisonings and Violence), Age Groups South Australia, 1978

Age Group	Cause							Total Deaths for Causes (E800-E999)
	Motor Vehicle Traffic Accidents (E810-E819)	Accidental Drownings (E830, E832, E910)	Accidental Poisonings (E850-E877)	Accidental Falls (E880-E887)	Suicide and (Intentional) Self-inflicted Injury (E950-E959)	Homicide and Injury Purposefully Inflicted (E960-E969)	Other External Causes (Balance E800-E999)	
MALES								
Under 15 years	9	7	3	1	1	8	10	39
15-24 years .....	104	2	5	2	17	3	19	152
25-34 years .....	35	4	1	—	23	3	16	82
35-44 years .....	16	5	—	—	21	1	8	51
45-54 years .....	11	4	1	1	16	—	11	44
55-64 years .....	20	2	2	3	20	—	9	56
65-74 years .....	15	—	—	2	10	1	9	37
75 years and over .....	8	1	—	17	8	—	7	41
Total .....	218	25	12	26	116	16	89	502
FEMALES								
Under 15 years	13	2	—	—	—	—	4	19
15-24 years .....	25	—	1	—	4	2	2	34
25-34 years .....	8	—	—	—	5	2	2	17
35-44 years .....	5	—	1	1	11	3	1	22
45-54 years .....	7	—	1	—	6	1	2	17
55-64 years .....	7	1	—	3	5	1	1	18
65-74 years .....	8	—	—	2	8	1	4	23
75 years and over .....	6	—	—	34	—	1	7	48
Total .....	79	3	3	40	39	11	23	198

Motor vehicle traffic accident deaths are considerably fewer than deaths caused by either heart disease, cerebrovascular disease or malignant neoplasms. However it ranks with the other major causes when considered in terms of 'life years lost'. In 1978 there were 233 deaths from all causes of persons in the 15-24 years age group and of these 55.4 per cent were caused by motor vehicle accidents.



#### INFANT MORTALITY

The infant mortality rate, *i.e.* the number of deaths of children under one year to every 1 000 live births, has shown a marked decline from 148.77 in 1875-79 to 15.62 in 1970-74. In 1978 the rate was 12.23. The number of infant deaths and infant death rates for selected years since 1851 are shown in the Statistical Summary, Appendix A.

The fall in infant mortality is attributable to many factors, but the most important are reflected in the falling neo-natal death rate. This is partly because of better pre-natal care and obstetric management, which have led to safer births, and to the neo-natal intensive care units at major maternity hospitals which have brought about a high survival rate for small and immature infants.

## Infant Mortality: Age at Death, South Australia

Year	Under 1 Day	1 Day and under 1 Week	1 Week and under 4 Weeks	4 Weeks and under 3 Months	3 Months and under 6 Months	6 Months and under 12 Months	Total under 12 Months	
							Number	Rate (a)
MALES								
1974 .....	75	57	13	13	19	11	188	17.92
1975 .....	56	26	7	16	15	9	129	12.63
1976 .....	59	35	17	21	20	13	165	16.77
1977 .....	47	22	9	10	14	11	113	11.41
1978 .....	51	22	11	15	23	16	138	14.53
FEMALES								
1974 .....	46	26	11	12	14	15	124	12.79
1975 .....	35	11	13	11	12	11	93	9.52
1976 .....	47	26	8	15	8	7	111	12.19
1977 .....	43	23	15	11	10	6	108	11.55
1978 .....	37	8	3	23	10	8	89	9.82
PERSONS								
1974 .....	121	83	24	25	33	26	312	15.46
1975 .....	91	37	20	27	27	20	222	11.11
1976 .....	106	61	25	36	28	20	276	14.57
1977 .....	90	45	24	21	24	17	221	11.47
1978 .....	88	30	14	38	33	24	227	12.23

(a) Rate per 1 000 live births.

The causes of infant deaths in 1978 classified according to age group are shown in the following table.

## Infant Mortality: Causes in Age Groups, South Australia, 1978

Cause of Death	Age Group					Total under 12 Months
	Under 1 Week	1 Week and under 4 Weeks	4 Weeks and under 3 Months	3 Months and under 6 Months	6 Months and under 12 Months	
Infective and parasitic diseases (000-136) .....	—	1	1	3	—	5
Diseases of nervous system and sense organs (320-389) .....	—	—	—	—	3	3
Diseases of respiratory system (460-519) .....	—	1	—	1	2	4
Congenital anomalies (740-759) .....	36	9	9	8	4	66
Perinatal causes:						
Maternal diseases and conditions (760-763) .....	2	—	—	—	—	2
Difficult labour (764-768) .....	3	—	1	—	—	4
Conditions of placenta and cord (770-771) .....	11	—	—	—	—	11
Haemolytic disease (774-775) .....	1	—	—	—	—	1
Anoxic and hypoxic conditions n.e.c. (776) .....	14	—	—	1	—	15
Immaturity, unqualified (777) .....	14	—	—	—	—	14
Other perinatal causes (769, 772, 773, 778) .....	34	1	—	—	—	35
Sudden death (cause unknown) (795) .....	1	2	23	20	8	54
All other diseases .....	2	—	1	—	3	6
Accidents, poisonings, violence (E800-E999) .....	—	—	3	—	4	7
Total all causes .....	118	14	38	33	24	227

Statistics of infant mortality shown in the previous table are inclusive of the neo-natal segment of perinatal deaths which are discussed in the following paragraphs. It should be noted that owing to reconciliation difficulties between the sources of information from which the data is compiled, minor differences may be noted when comparing neo-natal deaths with infant deaths under four weeks shown in this section.

## PERINATAL DEATHS

Perinatal deaths comprise:

- (a) *Fetal deaths* : a child born not alive, of at least twenty weeks gestation or 400 400 grams weight;
- (b) *Neo-natal deaths* : a live-born child dying within twenty-eight days after birth.

Legislation which became effective from the beginning of 1968 requires a Medical Certificate of Cause of Perinatal Death to be filled in by the attending medical practitioner and forwarded to the Principal Registrar. Before 1968 neo-natal deaths were not separated for registration purposes from other deaths. However, from 1937 to 1967 a separate register of all still births (fetal deaths) was maintained by the Principal Registrar; registration of a still birth was compulsory and related to any child which after the twenty-eighth week of gestation did not breathe or show any signs of life at any time after being completely expelled from its mother. Only total numbers of the registered still births were recorded and no detailed statistics were compiled.

**Live Births, Fetal Deaths, Neo-natal Deaths and Perinatal Deaths  
South Australia**

Year	Live Births Number	Perinatal Deaths					
		Fetal		Neo-natal		Total Perinatal	
		Number	Rate (a)	Number	Rate (b)	Number	Rate (c)
MALES							
1974 .....	10 489	119	11.22	144	13.73	263	24.79
1975 .....	10 212	92	8.93	89	8.72	181	17.56
1976 .....	9 838	107	10.76	111	11.28	218	21.92
1977 .....	9 907	89	8.90	78	7.87	167	16.71
1978 .....	9 496	96	10.01	84	8.85	180	18.77
FEMALES							
1974 .....	9 692	117	11.93	84	8.67	201	20.49
1975 .....	9 774	97	9.83	59	6.04	156	15.80
1976 .....	9 109	103	11.18	81	8.89	184	19.97
1977 .....	9 353	89	9.43	81	8.66	170	18.00
1978 .....	9 062	82	8.97	48	5.30	130	14.22
PERSONS							
1974 .....	20 181	236	11.56	228	11.30	464	22.73
1975 .....	19 986	189	9.37	148	7.41	327	16.70
1976 .....	18 947	210	10.96	192	10.13	402	20.98
1977 .....	19 260	178	9.16	159	8.26	337	17.34
1978 .....	18 558	178	9.50	132	7.11	310	16.55

(a) Fetal death rate is the number of fetal deaths per 1 000 of the total of live births and fetal deaths.

(b) Neo-natal death rate is the number of neo-natal deaths per 1 000 live births.

(c) Perinatal death rate is the number of perinatal deaths per 1 000 of the total of live births and fetal deaths.

Despite the improvements which have already been achieved infant and perinatal mortality still presents one of the most challenging areas for medical and scientific research. For example, Rh incompatibility is now a declining cause of death as a direct result of prophylactic immunisation. In Adelaide, research on placental efficiency and fetal anoxia has enabled pre-natal detection of impending danger, so that treatment can prevent damage or death of the fetus. Falling death rates attributable to placental disorders and anoxia is evidence of this.

## Perinatal Deaths: Causes of Death, South Australia

Cause of Death	1975	1976	1977	1978
Chronic circulatory and genito-urinary disease in mother .....	2	—	1	1
Other maternal conditions unrelated to pregnancy .....	10	14	12	6
Toxaemias of pregnancy .....	19	19	17	16
Maternal ante- and intrapartum infection .....	1	3	1	2
Difficult labour with abnormality of bones, organs or tissues of pelvis .....	4	2	—	1
Difficult labour with disproportion .....	2	1	—	1
Difficult labour with malposition of fetus .....	4	1	6	6
Difficult labour with abnormality of forces of labour .....	2	4	1	—
Difficult labour with other and unspecified complications .....	1	1	—	4
Other complications of pregnancy and child-birth .....	37	51	56	41
Conditions of placenta .....	69	76	48	52
Conditions of umbilical cord .....	19	19	15	15
Birth injury without mention of cause .....	3	7	13	8
Haemolytic disease of new-born .....	5	6	3	6
Anoxic and hypoxic conditions not elsewhere classified .....	42	64	33	30
Other conditions of fetus and new-born .....	38	50	49	46
Congenital anomalies .....	67	65	64	66
Infections of fetus and new-born .....	4	5	8	1
Other diseases of fetus and new-born .....	8	13	9	8
External causes of injury to new-born .....	—	1	1	—
Total .....	337	402	337	310

## EXPECTATION OF LIFE

The expectation of life at age  $x$  is defined as the average number of years lived after age  $x$  by each group of persons aged exactly  $x$  years. Because detailed information of the age structure and mortality experience of the population is required, the calculation of the expectation of life for each age is generally based on a period which spans a population census (the only time at which a sufficiently accurate age distribution is available).

The table which follows shows the expectation of life at specified ages in Australia based on mortality experience in the decade to 1910 and for the three years spanning each of the Censuses of 1921, 1933, 1947, 1954, 1961, 1966 and 1971. Generally, the figures shown in the table indicate that the number of years which people of all ages in Australia can expect to live has increased steadily since the turn of the century.

## Expectation of Life, Australia

Age	1901-10	1920-22	1932-34	1946-48	1953-55	1960-62	1965-67	1970-72
MALES								
0 .....	55.2	59.2	63.5	66.1	67.1	67.9	67.6	67.8
5 .....	57.9	60.4	62.6	63.8	64.3	64.8	64.4	64.5
10 .....	53.5	56.0	58.0	59.0	59.5	59.9	59.5	59.7
15 .....	49.0	51.4	53.4	54.3	54.7	55.1	54.6	54.8
20 .....	44.7	47.0	48.8	49.6	50.1	50.4	50.0	50.2
25 .....	40.6	42.7	44.4	45.0	45.5	45.8	45.4	45.6
30 .....	36.5	38.4	39.9	40.4	40.9	41.1	40.7	40.9
35 .....	32.5	34.2	35.5	35.8	36.3	36.5	36.0	36.2
40 .....	28.6	30.1	31.1	31.2	31.7	31.8	31.4	31.6
45 .....	24.8	26.0	26.9	26.8	27.2	27.4	27.0	27.1
50 .....	21.2	22.2	22.8	22.7	22.9	23.1	22.8	22.9
55 .....	17.7	18.5	19.0	18.8	19.0	19.2	18.8	18.9
60 .....	14.3	15.1	15.6	15.4	15.5	15.6	15.3	15.4
65 .....	11.3	12.0	12.4	12.3	12.3	12.5	12.2	12.2
70 .....	8.7	9.3	9.6	9.6	9.6	9.8	9.5	9.5
75 .....	6.6	6.9	7.2	7.2	7.3	7.5	7.3	7.3
80 .....	5.0	5.0	5.2	5.4	5.5	5.6	5.5	5.5
FEMALES								
0 .....	58.8	63.3	67.1	70.6	72.8	74.2	74.2	74.5
5 .....	60.8	63.6	65.6	67.9	69.6	70.8	70.6	71.0
10 .....	56.4	59.2	61.0	63.1	64.8	65.9	65.8	66.1
15 .....	51.9	54.6	56.3	58.3	59.9	61.0	60.8	61.2
20 .....	47.5	50.0	51.7	53.5	55.1	56.2	56.0	56.4
25 .....	43.4	45.7	47.2	48.7	50.2	51.3	51.2	51.5
30 .....	39.3	41.5	42.8	44.1	45.4	46.5	46.3	46.7
35 .....	35.4	37.3	38.4	39.5	40.7	41.7	41.6	41.9
40 .....	31.5	33.1	34.0	34.9	36.0	37.0	36.9	37.2
45 .....	27.6	29.0	29.7	30.5	31.4	32.3	32.3	32.6
50 .....	23.7	24.9	25.6	26.1	27.0	27.9	27.8	28.1
55 .....	19.9	21.0	21.6	22.0	22.8	23.6	23.6	23.8
60 .....	16.2	17.2	17.7	18.1	18.8	19.5	19.5	19.7
65 .....	12.9	13.6	14.2	14.4	15.0	15.7	15.7	15.9
70 .....	10.0	10.4	11.0	11.1	11.6	12.2	12.2	12.4
75 .....	7.6	7.7	8.2	8.3	8.7	9.2	9.2	9.4
80 .....	5.7	5.6	6.0	6.0	6.3	6.7	6.7	6.9

## Further References

Additional information may be found in the following publications:

## South Australian Office

- 3301.4 *Births*
- 3302.4 *Deaths*
- 3303.4 *Perinatal Deaths*

## Central Office

- 3301.0 *Births*
- 3302.0 *Deaths*
- 3303.0 *Causes of Death*
- 3304.0 *Perinatal Deaths*

## 5.4 MIGRATION

### Powers and Legislation of the Commonwealth Government

Under the Constitution, the Commonwealth Parliament is empowered to make laws on immigration, emigration, aliens and the influx of criminals. Immigration into Australia is regulated by the *Migration Act* 1958, which came into force on 1 June 1959. The *Aliens Act* 1947, provides that a register of aliens shall be maintained for every State or mainland Territory of Australia and that, unless exempted, aliens sixteen years of age and over are required to register with the Department of Immigration and Ethnic Affairs. Under the provisions of the *Australian Citizenship Act* 1948 aliens may, upon application, be granted citizenship; generally, this is after three years residence but may be earlier under certain circumstances. Legislation and conditions of immigration into Australia and of naturalisation are discussed in detail in *Year Book Australia*.

### Assisted Migration

From early colonial times free or assisted passages were given to large numbers of migrants from Britain, and to lesser numbers from other countries. Responsibility for migrant recruitment and transport was originally with the Colonial Governments, then the States, and in 1920-21 was transferred to the Commonwealth Government.

After the 1939-45 War, Australia and Britain entered into agreements to provide free passages for ex-servicemen and assisted passages for other British migrants. The first agreement ended in 1955, but the assisted passage agreement continued until 1972. Since then Australia has provided unilateral assistance for British migrants.

Large-scale assisted migration from Europe began with Australian participation in the resettlement of Displaced Persons under the auspices of the International Refugee Organisation. Agreement with a number of European countries, either directly or through the agency of the Inter-Governmental Committee for European Migration, resulted in a preponderance of European assisted migration to Australia over the next twenty-five years. During this time Australia developed unilateral arrangements to assist other migrants from Europe, the United States and elsewhere.

Since May 1973, there has been a uniform policy on assisted migration from all countries. Assisted passages are now only given to skilled tradesmen and refugees.

Refugees now comprise about one-third of Australia's total immigration program. Australia is committed to taking 14 000 Indo-Chinese refugees which will bring the number resettled in Australia since mid-1975 to 37 000 by 30 June 1980. In general, those selected from transit camps have immediate relatives in Australia or have other special qualities which will assist their integration into Australian society—*e.g.*, an occupation in demand or knowledge of English. Those who arrive in refugee boats without prior authority have their claims for Refugee Status determined by the Minister for Immigration and Ethnic Affairs, on recommendation from the Determination of Refugee Status Committee. Of the 11 513 Indo-Chinese refugees who arrived in Australia in the twelve months ending July 1979, 825 stated on arrival that their proposed destination was South Australia.

Assisted settler arrivals from January 1947 to December 1977 totalled 2 052 817, of whom 1 139 154 arrived under British schemes. Of the total, 230 711 stated on arrival that their proposed destination was South Australia.

### Overseas Arrivals and Departures

Since 1924 the movements of overseas travellers have been classified into two main categories according to declared intention regarding residence short-term and long-term

(including permanent). For short-term movements, overseas visitors and Australian residents are identified separately.

The principal categories of travellers according to stated purpose of travel are:

*Permanent movement*; consisting of people arriving with stated intent to settle permanently in Australia, and Australian residents departing with stated intent to reside permanently abroad.

*Long-term movement*; consisting of the arrival of visitors and the departure of residents with stated intent to stay (in Australia or in a country abroad respectively) for twelve months or more; and the departure of visitors and the return of Australian residents who have stayed (in Australia or in a country abroad respectively) for twelve months or more.

*Short-term movement*; consisting of all other movements, including the movement of Australian troops irrespective of period of stay.

The following table gives details for 1978 of overseas arrivals and departures of people whose State of residence had been or was intended to be South Australia. For departures, State of residence refers to the State in which the traveller regards himself as living or as last having lived. State of intended residence for arrivals is derived from the intended address given by settlers and Australian residents returning after a journey abroad. Particularly in relation to settlers, this information does not necessarily refer to the State in which a traveller will eventually establish a permanent residence.

**Overseas Arrivals and Departures: Mode of Transport and Category of Traveller, State of Residence, South Australia, 1978**

Category of Traveller	By Sea		By Air		Total
	Males	Females	Males	Females	
<b>ARRIVALS</b>					
Assisted settlers .....	—	—	487	453	940
Other settlers .....	97	85	1 291	1 435	2 908
Total permanent .....	97	85	1 778	1 888	3 848
Long-term residents returning .....	141	155	1 893	1 925	4 114
Long-term visitors arriving .....	6	8	567	418	999
Total permanent and long-term .....	244	248	4 238	4 231	8 961
Short-term residents returning .....	507	576	34 108	36 206	71 397
Short-term visitors arriving .....	131	133	11 034	11 491	22 789
Total arrivals .....	882	957	49 380	51 928	103 147
<b>DEPARTURES</b>					
Former settlers .....	117	123	740	735	1 715
Other residents .....	21	27	404	431	883
Total permanent .....	138	150	1 144	1 166	2 598
Long-term residents departing .....	192	220	2 113	1 863	4 388
Long-term visitors departing .....	13	13	628	467	1 121
Total permanent and long-term .....	343	383	3 885	3 496	8 107
Short-term residents departing .....	746	855	35 205	34 354	71 160
Short-term visitors departing .....	66	76	9 331	9 655	19 128
Total departures .....	1 155	1 314	48 421	47 505	98 395

### Australian Citizenship

The status of 'Australian Citizen' was created under the *Nationality and Citizenship Act* 1948 which came into force on 26 January 1949. The relevant Act is now the *Australian Citizenship Act* 1948 and under its provisions all migrants, regardless of origin, are required to satisfy uniform requirements for the granting of citizenship.

In the table which follows, numbers of migrants granted citizenship are shown according to previous citizenship. From 1974 citizens of Britain (and colonies) and other Commonwealth nations were included for the first time. Before 1 December 1973 these people were granted citizenship by registration.

**Previous Citizenship of Persons Granted Australian Citizenship, South Australia**

Nationality	1973	1974	1975	1976	1977	1978
Austrian .....	25	14	41	29	37	30
Britain and colonies, citizens of ..	238	5 430	5 011	2 526	2 198	
Cypriot .....	4	57	72	30	56	
Czechoslovak .....	104	57	111	29	37	21
Danish .....	20	7	18	31	11	12
Dutch .....	187	108	258	187	120	103
Finnish .....	18	19	31	27	33	14
French .....	61	35	91	60	75	65
German .....	279	132	416	275	142	137
Greek .....	961	671	1 520	964	698	473
Hungarian .....	23	22	41	37	29	24
Indian .....	..	20	99	78	36	44
Irish .....	..	1	68	60	22	38
Italian .....	739	435	1 109	1 092	769	672
Lebanese .....	49	27	95	89	79	43
Malaysian .....	..	19	60	61	45	55
Maltese .....	..	3	117	53	49	50
New Zealander .....	..	1	18	29	22	17
Polish .....	104	71	109	85	61	92
Singaporian .....	..	19	16	21	17	31
South African .....	..	15	65	56	50	32
Spanish .....	26	27	68	92	62	30
Turkish .....	32	16	57	30	19	11
US American .....	22	25	37	20	14	20
Yugoslav .....	370	224	673	502	537	445
Stateless .....	49	34	54	33	44	34
Other .....	143	131	369	272	426	362
Total .....	3 212	2 375	11 028	9 295	5 990	5 109

### Entry for Residence

From January 1975, all people living overseas other than New Zealand citizens who wish to come to Australia as settlers have had to obtain visas for entry. Under a reciprocal agreement with New Zealand, citizens of that country may enter Australia without prior authority and if travelling direct from New Zealand are not required to hold passports.

Australian migration policy enables consideration to be given to 'family reunion' applications which involve spouses and unmarried dependent children under twenty-one years of age and aged parents of permanent residents of Australia.

Sponsorship is necessary and nominations may also be accepted for parents of working age provided that they are regarded as able to maintain themselves satisfactorily in Australia without becoming a charge on public funds. People whose entry is approved within the scope of 'family reunion' rules are required to meet only health and character requirements.

Nominations in favour of, or applications from, refugees, displaced persons or those whose circumstances warrant special consideration on compassionate grounds may be considered under relaxed eligibility rules and selection standards in the light of their particular circumstances.

Citizens of Britain, Ireland or Canada may be considered for entry on a sponsored or unsponsored basis where close association with a permanent resident of Australia or a former close association with Australia can be shown. The people concerned must be self-supporting with the intention of retiring in Australia, and be able to meet all migrant standards excluding the need to have specific skills or qualifications.

Applications may be lodged overseas by intending migrants seeking entry on the basis of their having skills, qualifications, personal and other qualities which represent a gain to Australia and which are conducive to successful settlement. Applicants in this category must meet normal entry requirements, including favourable assessment of their employment prospects. Australian employers may nominate workers from overseas provided they are not available locally and the terms and conditions offered meet Australian awards and conditions.

#### **Temporary Entry**

Persons seeking to enter Australia for reasons other than settlement may be considered under the policies of the Commonwealth Government relating to visitors, students and temporary residents.

##### *Visitors*

Visas are issued free of charge overseas with minimal formality and delay to applicants seeking to make genuine visits to Australia for short periods for purposes such as tourism (sightseeing), business (negotiations, discussions, inspections), visiting relations or friends and pre-arranged medical treatment. Persons granted visit visas are made aware through information notes and a declaration they sign as part of the visa application that they are not entitled to undertake employment or studies and that they are required to leave Australia at the end of their authorised period of stay.

##### *Overseas students*

Australia has a comprehensive program of aid to under-developed countries involving the sponsorship of students. This program is the responsibility of the Minister for Foreign Affairs and is administered by the Australian Development Assistance Bureau. Each year the Bureau brings to Australia substantial numbers of mainly post-graduate students undertaking formal studies, and trainees who participate in short extensive courses, seminars or workshops.

The private overseas student policy is aimed at providing opportunities for people from overseas to acquire qualifications and skills, especially in fields where Australia has developed a special expertise, that will be of value to the student in pursuing a career in the homeland. This is to the benefit of the student and the home country but at the same time the scheme is an important element in the development of cultural exchange and fostering of international understanding and goodwill.

The private overseas scheme provides students with full-time courses of study at Australian educational institutions; specialised full-time courses at private institutions

such as pilot training, secretarial studies and computer courses; employment designed to provide on-the-job training for the acquiring and updating of skills; special English language courses where necessary; and exchange arrangements between students of Australian and overseas schools and universities.

#### *Temporary Residents*

The policy of the Commonwealth Government is that opportunities for employment in Australia are to be available as a first priority to Australian residents.

Temporary residence visas may, however, be issued to overseas persons to enter Australia for limited periods to engage in pre-arranged specialised activities. Persons who may receive such visas include senior management personnel possessing expertise not available locally; academic staff; members of religious organisations; and entertainers and sportsmen, both individuals and groups.

Generally, action for the granting of visas is initiated in Australia by the organisation or entrepreneur which seeks the temporary entry of the persons concerned. Persons seeking temporary residence for periods in excess of twelve months are required to meet the health and character standards which apply to migrant entry.

#### **Ethnic Affairs**

The Department of Immigration and Ethnic Affairs is responsible through its Ethnic Affairs Branch for advancing policies designed to secure the integration of migrants. In particular, through Ethnic Liaison Officers in each Commonwealth Department and Authority, it seeks to ensure that the needs of migrants and their integration into Australian society are fully taken into account in the day to day operations of the Government. The Australian Ethnic Affairs Council advises the Minister for Immigration and Ethnic Affairs on matters relating to the integration of migrants into the Australian community.

#### **Education**

The Commonwealth Government funds a comprehensive adult migrant education program which includes social orientation as well as instruction in the English language. Tuition is provided for adults, free of charge, in day and evening classes, correspondence, and courses at the workplace. A volunteer home tutor program helps to meet the needs of people who are unable to take advantage of other learning opportunities. Special tuition in English for children is provided within the school system with funds provided by the Commonwealth Government, mainly through the Schools Commission.

### **5.5 CHARACTERISTICS OF THE POPULATION**

Statistics relating to characteristics of the population of South Australia are derived from information obtained at each population census. Census technology and coverage have changed over the years, reducing comparability between censuses. Examples are the inclusion of full-blooded Aboriginals for the first time in 1966, and the introduction of sample processing in 1976. The latter may result in minor differences between the sum of estimated components and estimated totals, and between totals in different tables.

#### **Age Distribution**

Details of the age distribution of the population are of particular importance because, as well as revealing changes which have occurred in the age structure from one census to the next, they supply basic material for the calculation of fertility rates, mortality rates, annuity rates and probabilities of survival.

Age distribution of the population at the two most recent censuses after adjustment for underenumeration are given in the following table. Large absolute changes in population occurred in the age groups 25-29, which increased by 25 151, and 0-4 and 40-44, which fell by 7 898 and 7 773 respectively. The movement in the older two age groups is partly because of the post 1939-45 War birth rate increase and the low birth rates of the depression years of the early 1930s respectively. The decrease in the lower age group can in part be explained by the sharp decline in fertility in recent years.

The median age of the population of South Australia at the 1954 Census was 29.6 years, falling to 28.3 at the 1961 Census. After allowing for adjustment for underenumeration this trend continued and at 30 June 1971 the median age had fallen to 27.4 years (males 26.7 and females 28.1). However by 30 June 1976 it was estimated to have risen to 28.6 years (male 27.9 and females 29.2).

#### Estimated Age Distribution of Population, South Australia, 1971 and 1976<sup>(a)</sup>

Age Last Birthday (Years)	30 June 1971			30 June 1976			Increase Persons
	Males	Females	Persons	Males	Females	Persons	
0-4 .....	57 056	53 517	110 573	53 037	49 818	102 855	(→) 7 718
5-9 .....	59 521	56 653	116 174	57 951	54 860	112 811	(→) 3 363
10-14 .....	59 638	58 473	118 111	60 388	56 664	117 052	(→) 1 058
15-19 .....	53 803	53 151	106 954	59 757	58 478	118 235	11 281
20-24 .....	51 487	49 245	100 732	53 764	52 998	106 762	6 030
25-29 .....	40 608	38 961	79 569	52 624	52 096	104 720	25 151
30-34 .....	35 598	35 026	70 624	42 953	41 314	84 267	13 643
35-39 .....	33 302	32 336	65 638	36 658	36 106	72 764	7 126
40-44 .....	38 323	35 433	73 756	33 556	32 427	65 983	(→) 7 773
45-49 .....	37 743	36 434	74 177	37 923	35 118	73 041	(→) 1 136
50-54 .....	31 944	31 027	62 971	36 609	36 009	72 618	9 647
55-59 .....	29 180	29 273	58 453	30 590	30 203	60 793	2 340
60-64 .....	22 207	24 124	46 331	26 741	28 214	54 955	8 624
65-69 .....	16 496	19 097	35 593	19 615	22 947	42 562	6 969
70-74 .....	11 403	15 584	26 987	13 327	17 127	30 454	3 467
75-79 .....	7 316	12 473	19 789	8 000	12 829	20 829	1 040
80-84 .....	4 229	7 675	11 904	4 113	8 800	12 913	1 009
85-89 .....	1 679	3 583	5 262	1 738	4 069	5 807	545
90 and over .....	460	1 230	1 690	537	1 606	2 143	453
Total .....	591 993	593 295	1 185 288	629 881	631 683	1 261 564	76 276

(a) Population adjusted for underenumeration.

The next table shows that the proportion of the population under 15 years of age fell markedly between 1901 and 1947, rose significantly between 1947 and 1961 but since then has continued to fall. The proportion of the population 15 years and under 65 years showed an upward trend to 1947, maintained a fairly stable level of approximately 61 per cent until recently when the upward trend has again become evident. The proportion of the population 65 years and over continued to rise over the period 1901 to 1954, fell slightly between 1954 and 1971 but again rose by 1976.

#### Proportional Age Distribution of Population, South Australia, 1901 to 1976

Year	Males			Females			Persons		
	Under 15 Years	15 years and Under 65	65 Years and Over	Under 15 Years	15 Years and Under 65	65 Years and Over	Under 15 Years	15 Years and Under 65	65 Years and Over
Per cent									
1901 .....	36.0	60.0	4.0	35.9	59.8	4.3	35.9	59.9	4.2
1911 .....	31.1	64.4	4.5	31.3	63.8	4.9	31.2	64.1	4.7
1921 .....	32.2	62.8	5.0	31.3	63.5	5.2	31.7	63.2	5.1
1933 .....	26.8	66.6	6.6	26.0	66.6	7.4	26.4	66.6	7.0
1947 .....	25.1	67.0	7.9	23.5	67.0	9.5	24.3	67.0	8.7

## Proportional Age Distribution of Population, South Australia, 1901 to 1976 (continued)

Year	Males			Females			Persons		
	Under 15 Years	15 years and Under 65	65 Years and Over	Under 15 Years	15 Years and Under 65	65 Years and Over	Under 15 Years	15 Years and Under 65	65 Years and Over
Per cent									
1954 .....	29.2	62.9	7.9	28.6	61.3	10.1	28.9	62.1	9.0
1961 .....	31.4	61.2	7.4	30.7	59.1	10.2	31.1	60.1	8.8
1966 .....	30.7	62.4	7.0	29.5	60.5	10.0	30.1	61.4	8.5
1971(a) .....	29.8	63.2	7.0	28.4	61.5	10.1	29.1	62.4	8.5
1976(a) .....	27.2	65.3	7.5	25.5	63.8	10.7	26.4	64.5	9.1

(a) Population adjusted for underenumeration.

## Sex Distribution

The masculinity of the population of South Australia, *i.e.* the number of males to each 100 females at each census is shown below.

Census Year	Masculinity	Census Year	Masculinity
1844 .....	126.1	1901 .....	101.5
1846 .....	130.4	1911 .....	103.1
1851 .....	124.3	1921 .....	100.6
1855 .....	103.8	1933 .....	100.3
1861 .....	105.3	1947 .....	98.2
1866 .....	109.2	1954 .....	102.7
1871 .....	105.6	1961 .....	102.3
1876 .....	107.0	1966 .....	101.0
1881 .....	111.4	1971 (a) .....	99.8
1891 .....	105.6	1976 (a) .....	99.7

(a) Figures adjusted for underenumeration.

Before the 1971 Census the only census at which masculinity was less than 100 was 1947. The lower rate at the 1947 Census was partly attributable to the loss of male lives in the 1939-45 War, while the subsequent increase was mainly because of the predominantly male migration inflow of the early post-war period. This is shown very clearly in the following table which gives masculinity in five-yearly age groups at the six Censuses 1947 to 1976.

## Masculinity of Population According to Age, South Australia

Age Last Birthday (Years)	Census				Estimate	
	1947	1954	1961	1966	1971	1976
0-4 .....	104.30	104.46	103.21	105.73	106.61	106.46
5-9 .....	106.18	104.85	104.98	104.01	105.06	105.63
10-14 .....	104.60	105.38	105.75	105.26	101.99	106.57
15-19 .....	100.43	105.27	105.55	104.70	101.23	102.19
20-24 .....	95.29	113.81	109.21	103.05	104.55	101.45
25-29 .....	96.70	111.99	110.23	104.00	104.23	101.01
30-34 .....	99.26	106.65	110.78	105.49	101.63	103.97
35-39 .....	101.27	105.80	105.31	108.13	102.99	101.53
40-44 .....	107.23	107.05	104.86	104.43	108.16	103.48
45-49 .....	99.93	110.99	107.65	104.45	103.59	107.99
50-54 .....	89.83	104.54	106.49	104.43	102.96	101.67
55-59 .....	96.52	91.53	105.42	101.79	99.68	101.28
60-64 .....	93.65	87.94	88.90	97.59	92.05	94.78
65-69 .....	88.05	87.80	77.48	80.52	86.38	85.48
70-74 .....	83.07	81.72	78.01	68.46	73.17	77.81

Masculinity of Population According to Age, South Australia (*continued*)

Age Last Birthday (Years)	Census				Estimate	
	1947	1954	1961	1966	1971	1976
75-79 .....	77.76	73.53	71.88	69.06	58.65	62.35
80-84 .....	70.90	66.71	62.44	60.33	55.10	46.74
85-89 .....	65.19	62.38	59.06	52.12	46.86	42.71
90 and over ....	56.17	53.08	40.60	41.25	37.40	33.44
All ages ....	98.16	102.72	102.32	100.99	99.78	99.71

## Marital Status

The marital status of the population was ascertained at the censuses, when a statement of never married, married, married but permanently separated (legally or otherwise), widowed, or divorced was required in respect of every person enumerated.

Marital Status of Population, South Australia, Censuses 1971 and 1976<sup>(a)</sup>

Marital Status	30 June 1971				30 June 1976			
	Males		Females		Males		Females	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
<b>Never married:</b>								
Under 15 years of age	173 940	29.7	165 910	28.2	169 471	27.3	160 595	25.7
15 years of age and over	113 130	19.3	85 163	14.5	124 921	20.1	94 635	15.2
Total never married ....	287 070	49.0	251 073	42.7	294 392	47.5	255 230	40.9
Married .....	275 465	47.0	276 232	47.0	295 976	47.7	295 468	47.3
Married but permanently separated .....	6 565	1.1	7 204	1.2	9 698	1.6	11 890	1.9
Widowed .....	11 364	1.9	46 617	7.9	11 118	1.8	50 784	8.1
Divorced .....	5 587	1.0	6 530	1.1	8 976	1.4	11 223	1.8
Total .....	586 051	100.0	587 656	100.0	620 161	100.0	624 595	100.0

(a) Population as enumerated, not adjusted for underenumeration.

In 1976 the number of persons who were stated to have been never married represented 44.2 per cent of the total population, a lower proportion than in 1971. Married persons in 1976 represented 47.5 per cent of the total compared with 47.0 per cent in 1971.

At the 1971 Census 80.4 per cent of widowed persons were female and this proportion had increased to 82.0 per cent in 1976. The disparity between the number of widowed males and widowed females is the result of the greater longevity of females coupled with the usually younger age at marriage.

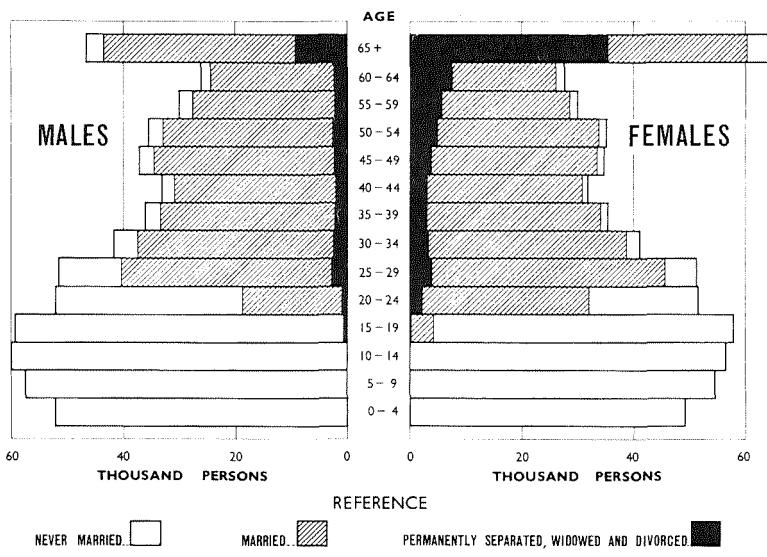
The diagram on page 153 shows details of sex, age and marital status of the population at the 1976 Census.

## Country of Birth

The Australian-born content of the population in South Australia was 85.7 per cent in 1911, 88.3 per cent in 1921, 90.3 per cent in 1933, and 93.3 per cent in 1947. Overseas migration had lowered the proportion of Australian-born persons to 86.1 per cent by 1954, while in 1976 the proportion was down to 76.4 per cent. The proportion of the population born in the United Kingdom, including the Republic of Ireland, fell from 11.0 per cent in 1911 to 5.1 per cent in 1947 and rose to 12.7 per cent in 1976.

**SOUTH AUSTRALIA**  
**DISTRIBUTION OF POPULATION BY SEX, AGE**  
**AND MARITAL STATUS**

1976 Census



**Country of Birth of Population, South Australia  
Censuses 1971 and 1976<sup>(a)</sup>**

Country of Birth	30 June 1971		30 June 1976		Increase Persons
	Persons	Males	Females	Persons	
Australia .....	893 638	468 111	483 424	951 535	57 897
New Zealand .....	3 226	2 113	1 985	4 098	872
Europe:					
United Kingdom and Republic of Ireland	148 020	79 409	78 473	157 882	9 862
Germany .....	15 410	7 631	7 762	15 393	(—) 17
Greece .....	14 717	7 712	6 994	14 706	(—) 11
Italy .....	32 428	17 275	14 668	31 943	(—) 485
Netherlands .....	11 743	5 717	5 024	10 741	(—) 1 002
Poland .....	7 058	4 125	2 789	6 914	(—) 144
Yugoslavia .....	8 931	5 187	3 816	9 003	72
Other .....	22 815	12 650	10 032	22 682	(—) 133
Total Europe .....	261 122	139 706	129 558	269 264	8 142
Other countries .....	15 721	10 231	9 631	19 862	4 141
Total born outside Australia .....	280 069	152 051	141 173	293 224	13 155
Total .....	1 173 707	620 162	624 598	1 244 760	71 053

(a) Population as enumerated, not adjusted for underenumeration.

### Period of Residence in Australia

The post-war migration flow into Australia is shown by the number of persons who have taken up residence in Australia since the late 1940s.

### Period of Residence in Australia of Persons in South Australia Censuses 1971 and 1976<sup>(a)</sup>

Period of Residence in Australia	30 June 1971			30 June 1976			Visitors Persons	
	Residents			Residents				
	Males	Females	Persons	Males	Females	Persons		
Under 1 year .....	7 686	7 460	15 146	1 935	2 024	3 959		
1 year and under 2 .....	8 309	8 034	16 343	2 918	3 021	5 939		
2 years and under 3 .....	6 950	6 724	13 674	3 521	3 442	6 962		
3 years and under 4 .....	4 962	4 721	9 683	3 466	3 615	7 082	3 271	
4 years and under 5 .....	6 032	6 003	12 035	3 744	3 534	7 278		
5 years and over .....	103 438	92 166	195 604	83 377	76 039	159 416		
Not stated .....	6 887	7 005	13 892	51 255	48 059	99 314		
Born outside Australia .....	144 264	132 113	276 377	150 214	139 736	289 950	3 271	
Born in Australia .....	439 365	454 273	893 638	468 111	483 424	951 535		
Total .....	583 629	586 386	1 170 015	618 325	623 160	1 241 485	3 271	

(a) Population as enumerated, not adjusted for underenumeration.

At the 1976, and previous censuses, details of period of residence in Australia were sought from overseas born. In 1947 there were 43 552 residents in South Australia (including visitors) who were not born in Australia and only 5 per cent of these had lived in Australia for less than five years. By 1954 the number of such persons had risen to 110 605 of whom 51 per cent had resided in Australia for less than 5 years. By 1976 the number (excluding visitors) had increased to 289 950, but the proportion of those who had lived in Australia for less than five years had fallen to 10.8 per cent although the reliability of the latter figure may be affected by the higher number in the 'Not stated' category.

### Religion

Information on the religious affiliations of the population is obtained only at population censuses. There is, however, no legal obligation to answer the question on religion and at the 1976 Census respondents representing approximately 10 per cent of the South Australian population chose not to answer.

The Church of England has always had the greatest number of adherents, its relative importance having been fairly consistent since 1866 when it accounted for 31.8 per cent of answers compared with 22.1 per cent in 1976.

Changes in the pattern of religious affiliation appear to some extent attributable to migratory movements. This is particularly noticeable in the case of Catholics (*i.e.* persons described as either Catholics or Roman Catholics) who accounted for only 14.3 per cent of the answers in 1933 compared with 19.9 per cent in 1976.

The proportion of the population claiming no religious affiliations has increased over the years, from 8.2 per cent of the population in 1971 to 11.3 per cent in 1976.

**Religious Denomination of Population, South Australia  
Censuses 1971 and 1976<sup>(a)</sup>**

Religious Denomination	30 June 1971		30 June 1976	
	Persons	Proportion of Total	Persons	Proportion of Total
Christian:		Per cent		Per cent
Baptist .....	22 010	1.9	22 004	1.8
Catholic, Roman Catholic <sup>(b)</sup> .....	242 166	20.6	247 572	19.9
Church of England .....	286 754	24.4	275 338	22.1
Lutheran .....	62 641	5.3	62 344	5.0
Methodist .....	215 328	18.3	195 890	15.7
Presbyterian .....	39 920	3.4	34 778	2.8
Other Christian .....	133 057	11.3	136 454	11.0
Total Christian .....	1 001 876	85.4	974 381	78.3
Non-Christian:				
Hebrew .....	1 131	0.1	1 072	0.1
Muslim .....	628	0.1	1 031	0.1
Other Non-Christian .....	1 424	0.1	2 747	0.2
Total Non-Christian .....	3 183	0.3	4 849	0.4
Indefinite .....	3 751	0.3	5 528	0.4
No religion .....	95 874	8.2	140 070	11.3
Not stated .....	69 023	5.9	119 930	9.6
Total .....	1 173 707	100.0	1 244 758	100.0

(a) Population not adjusted for underenumeration. (b) So described in individual census schedules.

### Educational Attainment

#### Schooling History

At the 1976 Census information was sought on the age at which people aged 15 years and over left school. The following table summarises the details obtained from this question and for children under fifteen years in South Australia.

**Schooling History of Population, South Australia  
Census 1976<sup>(a)</sup>**

Age Left School	Males	Females	Persons	Proportion of Total
Not attending school:				Per cent
Age 0-4 years .....	51 899	49 374	101 272	8.1
Age 5-14 years .....	2 850	2 427	5 277	0.4
Still attending school .....	137 279	129 268	266 546	21.4
Age left school:				
12 years or younger .....	14 050	15 343	29 393	2.4
13 years of age .....	17 639	18 931	36 570	2.9
14 years of age .....	101 293	110 715	212 008	17.0
15 years of age .....	89 255	105 293	194 548	15.6
16 years of age .....	82 976	88 348	171 324	13.8
17 years of age .....	52 996	47 772	100 768	8.1
18 years of age .....	23 170	14 391	37 561	3.0
19 years or older .....	11 488	5 050	16 537	1.3
Never attended school .....	3 690	4 352	8 042	0.6
Not stated .....	31 578	33 333	64 911	5.2
Total .....	620 162	624 596	1 244 757	100.0

(a) Population as enumerated, not adjusted for underenumeration.

#### Educational Qualifications

At the 1971 and 1976 Censuses information was sought on the type of educational qualification obtained. The following table shows that of the total population 15 years of

age and over in 1971, only 19.5 per cent had obtained any educational qualifications since leaving school, but this proportion had risen to 21.2 per cent in 1976.

**Educational Qualifications of Population, South Australia  
Censuses 1971 and 1976<sup>(a)</sup>**

Highest Level of Qualification Obtained	1971		1976	
	Persons	Males	Females	Persons
No qualification .....	671 026	274 540	355 957	630 498
Trade level .....	84 283	80 333	11 601	91 934
Technician level .....	26 770	17 322	20 379	37 701
Tertiary (excluding degrees) .....	25 090	14 728	15 704	30 431
Bachelor degree, post graduate-diploma or equivalent .....	12 404	14 413	6 277	20 691
Higher degree level or equivalent .....	1 779	2 178	474	2 652
Qualification not classified by level .....	12 449	3 256	7 368	10 623
Inadequately described .....	56			
Total with qualifications .....	162 831	132 230	61 803	194 032
Not stated .....	—	43 920	46 240	90 160
Total population 15 years of age and over .....	833 857	450 689	464 001	914 690

(a) Population as enumerated, not adjusted for underenumeration.

**Family Structures**

At the 1976 Census, occupants of private dwellings were asked to identify the household head and to describe the relationship of each person in the household to this person. From the answers provided to this and other questions, the structures of families were determined. The results for South Australia are summarised in the following table.

**Family Structure of Population, South Australia  
Census 1976<sup>(a)</sup>**

Family Structure	Male Head	Female Head	Total Families
Head only .....	31 140	43 768	74 908
Head and children only .....	2 336	12 208	14 544
Head and spouse only .....	91 818	2 382	94 200
Head, spouse and children .....	113 976	1 388	115 364
Head and other adults only .....	5 344	11 420	16 764
Head, other adults and children .....	1 154	4 288	5 442
Head, spouse and other adults only .....	36 230	506	36 736
Head, spouse, other adults and children .....	39 316	448	39 764
Commune .....	84	12	96
Total families in private dwellings .....	321 398	76 420	397 818

(a) Population as enumerated, not adjusted for underenumeration.

## PART 6

# SOCIAL ENVIRONMENT

## 6.1 LAW, ORDER AND PUBLIC SAFETY

### LAW AND ADMINISTRATION

The law in force in South Australia consists of:

- (i) so much of the common law of England and such English statute law as came into force on the original settlement of the colony in 1836;
- (ii) Acts passed by the Parliament of the State of South Australia, together with regulations, rules, orders, etc., made thereunder;
- (iii) Acts passed by the Commonwealth Parliament within the scope of its allotted powers, together with regulations, rules, orders, etc., made thereunder;
- (iv) Imperial law binding South Australia as part of the British Commonwealth, as part of Australia or as a State—subject, since 1931, to the Statute of Westminster (this relates mainly to external affairs or matters of Imperial concern);
- (v) Case law (this consists of judicial decisions of the English, Commonwealth or State Courts, respectively, and represents an important part of the law in force in South Australia).

The scope of Commonwealth legislation is limited to the subjects specified in the Commonwealth Constitution. In some cases Commonwealth Government powers of legislation are exclusive of, in others concurrent with, those of the State. In all cases of conflict, valid Commonwealth laws override State laws.

**LEGAL PROFESSION**

Legal practitioners in South Australia are entitled to act as either barristers or solicitors, although some practitioners elect to practise only in one of these capacities. All practitioners have a right of audience in all Courts of South Australia except the Supreme Court, where only principals have this right.

After completing the prescribed academic training, followed by a period of practical training in a legal practice course or in articles, aspirant practitioners apply to the Full Court of the Supreme Court for admission to practise, and are issued with a Practising Certificate which is subject to annual renewal.

Rules of Court regulate the conditions of entry into the legal profession and the Legal Practitioners Act, 1936-1979 provides the basis for control of legal practitioners in such areas as discipline, remuneration, accounting for trust funds and the qualifications of notaries public. The Act also constitutes the Law Society of South Australia and provides for the hearing of charges of unprofessional conduct by a Statutory Committee of that Society, and the referral of such charges to the Supreme Court which may make such order as it thinks fit.

In 1979 there were 979 legal practitioners entitled to practise in South Australia. Of this number, 774 were engaged in private practice.

Members of the legal profession voluntarily provide an advisory service outside normal business hours. Any person may obtain preliminary legal advice through this service for which a nominal charge is made. The service operates at Adelaide, Campbelltown, Christies Beach, Glenelg, Norwood, Mount Gambier, Naracoorte and Port Lincoln.

**LAW DEPARTMENT**

In South Australia the Attorney-General is a Minister of State Parliament. There is a Solicitor-General who, under the Attorney-General, acts as principal legal adviser to the Government.

The Attorney-General is charged with the conduct of business relating to the Supreme Court and inferior Courts as well as statute law revision and consolidation. He also advises Ministers on questions on which his legal opinion is required, initiates and defends proceedings by and against the State and determines whether informations should be laid in cases of indictable offences.

The Attorney-General also administers Acts of Parliament relating to justices, coroners, lands titles, registration of companies and business names, and the Electoral Department.

The Law Department consists of administrative functions, the Local and District Criminal Courts and Courts of Summary Jurisdiction, the Crown Law Office, the Sheriff's Office, the Coroner's Office, the Government Reporting Division, Office of Crime Statistics and ancillary legal research services.

**SUPREME COURT**

The Supreme Court is the superior court of record in and for the State and is constituted by the Chief Justice and the puisne judges appointed under the Supreme Court Act, 1935-1975. The Supreme Court is a court of law and equity and is vested with jurisdiction in civil, criminal, testamentary, land and valuation, admiralty and appellate causes or matters. The Supreme Court Rules made by the Judges under the power contained in the Act regulate the pleading practice and procedure of the Court in any jurisdiction and the manner in which all suitors' funds are to be dealt with. The officers of the Court are appointed by the Governor on the recommendation of the Public Service

Board except that in the case of the masters, the concurrence of the Chief Justice is required.

There are at present thirteen judges of the Supreme Court, comprising the Chief Justice Mr Justice King, and twelve puisne judges. A judge holds office until the age of seventy years at a salary determined by the Governor. The Court sits in Adelaide, but holds circuit sessions three times each year at Port Augusta and Mount Gambier.

### Civil and Criminal Jurisdiction

Generally speaking, the Supreme Court has unlimited civil and criminal jurisdiction, except in respect of matters which are reserved for the original jurisdiction of Commonwealth Courts. The Court as a rule determines its own practice.

Following the establishment of District Criminal Courts, jurisdiction to hear many indictable offences was vested in these Courts late in 1970.

Crimes and misdemeanours prosecuted by indictment in the Supreme Court must be tried before a jury. The Court has original jurisdiction over all litigious matters arising in the State except where its jurisdiction is excluded by statute. The original jurisdiction of the Court is usually exercised by a single judge sitting in Court or in Chambers. Although it is still possible to have certain civil issues tried before a jury, this has not been done for many years.

The Court has power to restrain inferior courts from acting in excess of their jurisdiction and may, by order, compel them to enforce a legal right. The Court acts as a court of appeal from inferior courts. In proper cases, appeals lie from decisions of the Supreme Court to the High Court of Australia or where not excluded by statute, direct to Her Majesty In Council (*i.e.* the Privy Council).

The following table gives details of persons tried and convicted for the years 1973 to 1978. In the post-war period to the end of 1977, a total of fifty-six persons were sentenced to death in South Australia; forty-one of these sentences were subsequently commuted. The last execution in South Australia occurred in 1964; no female has been executed in the State since 1873. The Statutes Amendment (Capital Punishment Abolition) Act, 1976 assented to on 23 December 1976 abolished capital punishment in South Australia.

**Supreme and Circuit Courts: Trials and Convictions, South Australia**

Year	Tried		Convicted	
	Males	Females	Males	Females
1973 .....	149	21	125	17
1974 .....	153	10	132	10
1975 .....	188	9	149	6
1976 .....	188	17	143	15
1977 .....	198	16	175	13
1978 .....	210	22	172	20

### Testamentary Causes Jurisdiction

The Supreme Court in its testamentary causes jurisdiction is the only authority competent to grant probate of the will, or administration of the estate, of any deceased person who leaves real or personal property in the State. Except in the case of certain small estates, a grant of representation is generally necessary to obtain title to the property of a deceased person. The Succession Duty Act, 1929-1977 was amended

during 1979 and exempted completely from payment of succession duty, the estates of persons who died on or after 1 January 1980.

The powers of the Court are exercised by a judge, the Master and the Registrar or Deputy Registrar of Probates. The latter deal with all applications for probate and administration where there is no contention and any matters prescribed by the rules. In cases of doubt or difficulty, the Registrar may obtain the direction of a Judge. The records of the Court are available for public inspection, and copies of wills and other documents may be obtained.

Details of trials and convictions for Higher Courts (Supreme and Circuit, and District Criminal) in 1978 are included in the table below.

#### Higher Courts: Trials and Convictions, South Australia, 1978

Major Offence (Grouped)	Supreme and Circuit Courts				District Criminal Courts			
	Tried		Convicted		Tried		Convicted	
	Males	Females	Males	Females	Males	Females	Males	Females
Homicide .....	23	3	13	3	16	1	12	1
Assault (including rape) .....	78	1	58	1	213	9	164	6
Robbery and extortion .....	43	3	41	2	10	—	10	—
Fraud, forgery and misappropriation .....	20	6	18	6	68	14	60	13
Theft, breaking and entering .....	15	1	15	1	588	40	563	33
Property damage .....	11	3	9	3	10	—	10	—
Driving and related offences .....	—	—	—	—	11	1	11	1
Other offences .....	20	5	18	4	170	25	159	23
Total .....	210	22	172	20	1 086	90	989	77

#### LOCAL AND DISTRICT CRIMINAL COURTS

Local and District Criminal Courts are now constituted under the Local and District Criminal Courts Act, 1926-1978. An amendment to the Act in 1969 increased the jurisdiction of Local Courts, established District Criminal Courts and provided for the appointment of a Senior Judge and other judges.

#### Local Courts

Local Courts were first established in South Australia by an ordinance of 1850 and originally had criminal as well as civil jurisdiction. The Local Courts Act, 1926 effected important alterations in the structure and jurisdiction of Local Courts by abolishing juries in Local Courts and also justices as constituent members of Courts of Full Jurisdiction (except on the application of a party), by conferring equitable jurisdiction on the Local Court of Adelaide of Full Jurisdiction, and by giving a full appeal to the Supreme Court on facts as well as on law from all judgments, determinations and orders of local courts in actions involving more than \$60.

Local Courts are divided into three groups—Full Jurisdiction, Limited Jurisdiction and Special Jurisdiction. The courts vested with all three jurisdictions are the Local Courts of Adelaide, Berri, Mount Gambier, Port Lincoln, Port Pirie and Whyalla. These courts may hear and determine actions for amounts up to \$20 000. The equitable jurisdiction provisions have also been extended to all Local Courts of Full Jurisdiction. Local Courts of Limited Jurisdiction may hear and determine claims of up to \$2 500, with special provisions for hearing 'small claims' as defined for a pecuniary sum not exceeding \$500. Courts of Special Jurisdiction may hear and determine any unsatisfied judgment summons whatever the amount of the judgment.

**Local Courts: Summary of Transactions, South Australia**

Year	Total Claims		Verdicts and Judgments				Service and Execution of Process Act	
	Summons Issued (a)	Amount Sued For	Verdicts by Trial		Judgment by Default		Summons for Service out of Jurisdiction	Amount
			Number	Amount	Number	Amount		
1974 .....	93 375	\$'000 24 615	1 678	\$'000 1 951	36 853	\$'000 6 264	1 815	\$'000 1 117
1975 .....	84 607	26 109	2 356	4 013	34 079	8 133	1 812	1 722
1976 .....	70 443	46 343	3 348	6 321	29 016	8 100	2 102	2 946
1977 .....	73 687	48 116	5 115	5 055	29 005	12 084	2 651	2 771
1978 .....	77 963	45 837	5 132	5 782	29 147	14 071	2 676	3 988

(a) Including those withdrawn or settled out of Court.

A Local Court of Full Jurisdiction may be constituted of a Judge of the Supreme Court or a Local Court Judge, and exercise all jurisdictions under the Act. A special magistrate may exercise limited jurisdiction and special jurisdiction, while two justices of the peace sitting together or one special justice sitting alone may exercise special jurisdiction only.

Any Local Court may reserve any question of law arising in any action for the decision of the Supreme Court, and any party who is dissatisfied with any final judgment, determination or order of a Local Court, if the claim exceeds \$500, may appeal to the Supreme Court. Appeals involving claims under \$500 may be made if leave of the Supreme Court is obtained.

Pursuant to Section 28 of the Act the Governor may appoint the Senior Judge or any other judge to make rules of court for carrying into effect the Act or any other Act conferring jurisdiction upon Local Courts.

#### District Criminal Courts

These courts came into operation on 31 August 1970 and have jurisdiction to hear and determine many of the indictable offences that previously could only be tried by the Supreme Court. The State is divided into three proclaimed districts; Central Criminal Court District, Northern Criminal Court District, and the South Eastern Criminal Court District.

The jurisdiction of a District Criminal Court is exercisable by a District Criminal Court Judge sitting in open court, with or without a jury, or in chambers as the case may require. The Crown is represented in District Criminal Courts by the Attorney-General or by counsel appearing on his behalf. The other party may conduct his own case or may engage counsel on his behalf. A person who is not a practitioner of the Supreme Court entitled to practise cannot appear in a District Criminal Court on behalf of any party.

Appeals against verdicts and sentences of District Criminal Courts are to the Full Court.

Pursuant to Section 321 of the Act the Senior Judge and two other judges may make rules of court for carrying into effect the District Criminal Court provisions of the Act.

#### COURTS OF SUMMARY JURISDICTION

Courts of Summary Jurisdiction are held in all major towns to hear criminal cases. In offences of dishonesty their jurisdiction is in most instances confined to cases where the property value is not more than \$400, and the limit of their jurisdiction as to penalty is imprisonment for two years. Their procedure is regulated by the Justices Act, 1921-1976.

They are presided over, either by a special magistrate, a special justice or by two justices of the peace, with the more serious causes generally being heard by a special magistrate.

Special magistrates are appointed under the Justices Act and the Local Courts Act, and each appointment must be approved by the Chief Justice. Generally they are required to be practitioners of the Supreme Court who have been practising for some years.

**Courts of Summary Jurisdiction (Magistrates Courts), Persons Convicted  
South Australia<sup>(a)</sup>**

Offence	1973-74	1974-75	1975-76	1976-77	1977-78
Against the person .....	718	888	767	793	1 400
Against property:					
Burglary and housebreaking .....	1	—	13	82	939
Larceny (various) .....	1 996	2 223	1 956	2 125	4 764
Other .....	1 254	1 430	1 251	1 256	1 950
Against morality.....	167	146	150	219	417
Against good order:					
Drug offences .....	150	274	440	904	1 221
Drunkenness .....	7 973	6 736	5 923	4 634	3 433
Unlawfully on premises .....	258	307	232	214	323
Vagrancy .....	206	152	75	95	117
Other .....	2 200	2 731	2 608	2 412	3 167
Other, relating to:					
Road Traffic and Motor Vehicles Acts ...	57 518	70 732	76 835	86 478	81 213
Licensing Act .....	250	299	365	344	243
Community Welfare Act .....	1 523	565	332	154	126
Police Offences Act .....	1 020	1 091	1 024	982	1 296
Local Government Act .....	5 620	6 836	1 452	2 168	2 632
Broadcasting and Television Act .....	2 919	608	—	—	—
Income Tax Assessment Act .....	1 591	1 702	9	111	—
Other .....	7 673	7 682	2 326	2 253	2 172
Total persons convicted:					
Males .....	81 812	92 296	84 874	91 800	91 120
Females .....	11 225	12 106	10 884	13 424	14 293
Total .....	93 037	104 402	95 758	105 224	105 413

(a) Excludes juveniles. Where multiple charges have been laid against one individual at the same time each type of offence has been counted separately.

### CHILDREN'S COURTS

Proceedings in Children's Courts are regulated by the Children's Protection and Young Offenders Act, 1979 which came into force on 1 July 1979, replacing the Juvenile Courts Act, 1971-1975. The Senior Judge appointed under the new Act exercises administrative control over juvenile courts throughout the State.

Children's Courts may be presided over by a judge or magistrate. Special Justices assist in dealing with most of the traffic offences and some summary matters. Limitations are imposed on the jurisdiction of the courts depending on whether a judge, magistrate, or justices of the peace have been appointed to preside.

Children's Courts may not try homicide offences. In cases of very serious offences or persistent serious offending, an order for the child to be tried in an adult court may be obtained. A child may elect to be tried as an adult and if found guilty, be subject to the penalties set by the Children's Court.

Screening panels decide whether a young offender appears before a non-judicial tribunal called a Children's Aid Panel or a Children's Court.

Most first and minor offenders are referred to the aid panels for consideration. Children's Courts are closed to the public. Members of the Press may be present, but they are generally restricted to publishing the results of the proceedings and may not identify any child concerned in the proceedings.

Penalties imposed by a Children's Court range from a bond or fine, with or without recording a conviction, to a sentence of detention in a training centre for a period between two months and two years. When a period of detention is imposed, reports are required on the social background and circumstances of the child and these are reviewed throughout the period of detention. Payment of compensation may also be ordered as a rehabilitative and not a punitive measure.

A child, dissatisfied with a finding, may appeal to the Supreme Court or may have the order reconsidered in the Children's Court.

Children's Courts also deal with neglected children where the Director-General of Community Welfare applies for a declaration that a child in need of care be placed under the guardianship of the Minister of Community Welfare. For further details see Part 6.6.

**Young Offenders: Offences Proved in Children's Courts and Aid Panels  
South Australia<sup>(a)</sup>**

Type of Offence	Children's Courts		Children's Aid Panels	
	1977-78	1978-79	1977-78	1978-79
Homicide .....	1	9	—	—
Assault .....	296	279	74	73
Robbery .....	34	24	4	3
Rape .....	22	25	2	1
Other heterosexual offences .....	38	24	15	3
Breaking and entering .....	1 295	1 294	516	543
Vehicle theft .....	938	821	226	109
Other theft .....	1 478	1 623	2 050	1 921
Wilful damage .....	417	376	256	221
Receiving .....	124	108	95	91
Fraud .....	404	266	86	71
Drug offences .....	342	241	33	12
Driving and traffic (b) .....	873	769	685	732
Transport and communication .....	—	9	—	29
Liquor .....	392	371	44	55
Unlawfully on premises .....	148	137	113	107
Indecent behaviour .....	85	76	19	16
Drunk, disorderly .....	727	764	146	124
Other .....	725	580	308	255
Total offences .....	8 339	7 796	4 672	4 366
Male .....	7 453	6 901	3 736	3 413
Female .....	886	895	936	953
 Individual offenders:				
Male .....	2 949	2 724	2 306	2 170
Female .....	465	472	725	754

(a) Under 18 years. Excludes truants and children found to be neglected, destitute or uncontrolled.

(b) Excludes most minor traffic offences.

## THE LICENSING COURT

The licensing of hotels and the issue of liquor licences and permits is governed by the Licensing Act, 1967-1977 under which is constituted a Licensing Court consisting of a Licensing Court Judge, Special Magistrates designated by the Governor as members of the Licensing Court, and Licensing Court Magistrates. The classes of licences that may be granted are:

(a) Full publican's licence.	(j) Packet licence.
(b) Limited publican's licence.	(k) Railway licence.
(c) Wholesale storekeeper's licence.	(l) Restaurant licence.
(d) Retail storekeeper's licence.	(m) Limited restaurant licence.
(e) Wine licence.	(n) Cabaret licence.
(f) Brewer's Australian ale licence.	(o) Theatre licence.
(g) Distiller's storekeeper's licence.	(p) Special licence.
(h) Vigneron's licence.	(q) Twenty-litre licence.
(i) Club licence.	(r) Hotel broker's licence.

Fees for licences are paid in accordance with the amount of liquor purchased (or in some cases sold) during the preceding twelve months and at present, in the case of the retail licences, is calculated at 8 per cent of the amount of purchases.

The following table shows the number of main classes of licences and also permits issued during the years ended 30 June 1975 to 1979.

Liquor Licences and Permits, South Australia

Licence or Permit	Year ended 30 June				
	1975	1976	1977	1978	1979
<b>Licence:</b>					
Publican's;					
Full .....	602	603	603	604	603
Limited .....	55	55	58	59	66
Storekeeper's (a) .....	183	189	190	190	192
Vigneron's .....	67	75	86	89	103
Club .....	177	185	199	216	241
Restaurant .....	151	171	202	229	254
<b>Permits:</b>					
Special licensed premises .....	5 634	4 548	3 451	2 220	2 307
Special unlicensed premises .....	17 071	17 654	17 797	19 046	20 768
Booth .....	7 466	7 903	8 221	9 326	10 272
Club .....	2 036	2 041	2 092	2 209	2 452
Other .....	744	1 225	1 078	1 246	1 444

(a) Covers wholesale, retail and distillers.

In December 1976, legislation was enacted to authorise discretionary hotel bar trading hours from 5 a.m. to 12 midnight, Monday to Saturday, and to fix obligatory trading hours, Monday to Saturday from 11 a.m. to 8 p.m.

In the case of a full publican's, limited publican's and restaurant licence, liquor may be sold and disposed of in the dining area at any time on any day with or ancillary to *bona fide* meals.

The Court may upon the granting or renewal of a full publican's licence, having regard to the needs of the public, exempt the holder of the licence from the obligation to supply lodging. A limited restaurant licence authorises the consumption of liquor at any time on any day in the premises specified in the licence, with or ancillary to *bona fide* meals, by persons bringing the liquor onto the premises for their own consumption.

Five of these licences were in operation at 30 June 1979.

Permits may be granted under certain circumstances to extend the trading hours of licensed premises and to allow the sale, supply or consumption of liquor in unlicensed premises. Permits may be granted to clubs, for periods of up to one year, for the sale and supply to members for consumption on club premises—at 30 June 1979, 786 of these permits were current. Clubs whose takings from the sale of liquor exceed \$25 000 in any one year are not eligible for a permit but are required to apply for a club licence.

### BANKRUPTCY

Since 1928 bankruptcy has been under Commonwealth Government jurisdiction. Under the *Bankruptcy Act* 1966 South Australia is a bankruptcy 'district' and jurisdiction is exercised through the Court of Insolvency of the State of South Australia exercising Commonwealth jurisdiction in bankruptcy.

A debt of at least \$500 is necessary before a creditor may commence bankruptcy proceedings. Preferential creditors include employees for amounts owing in respect of wages and salaries, worker's compensation, long service leave, annual leave, recreation leave or sick leave, and the Commissioner of Taxation for tax instalment deductions and withholding tax.

A bankrupt who has not previously been discharged is automatically discharged after five years unless an objection is filed with the Registrar in Bankruptcy.

### Bankruptcies: Number, Liabilities, Assets, South Australia

Year	Bankruptcies and Orders for Administration of Deceased Debtors' Estates			Compositions, Deeds of Arrangement and Deeds of Assignment			Total Debtors
	Number	Assets	Liabilities	Number	Assets	Liabilities	
1974-75 .....	427	1 580 680	3 304 232	10	718 437	805 578	437
1975-76 .....	341	2 894 881	3 646 832	10	394 858	528 012	351
1976-77 .....	448	3 705 374	5 993 902	8	345 840	365 942	456
1977-78 .....	655	4 973 118	9 492 844	18	551 434	2 327 360	673
1978-79 .....	816	1 551 459	10 420 291	31	2 032 725	2 495 537	847

### JURY SYSTEM

The procedure in relation to juries is governed by the Juries Act, 1927-1976.

Indictable offences are tried before a Judge and twelve jurors sitting in the criminal jurisdiction of either the Supreme Court or District Court, depending on the gravity of the offence. In South Australia, for many years juries have not officiated when civil causes were being tried.

Jury districts for the metropolitan and certain country areas are fixed by proclamation pursuant to the Juries Act and consist of a number of subdivisions of the House of Assembly electoral districts. Legislation passed in 1965 provided for women to serve on juries as well as men, and, with certain exceptions, all persons over the age of twenty-five and under sixty-five who are enrolled as House of Assembly electors within the proclaimed jury districts are qualified and liable to serve as jurors.

Persons who may claim exemption from liability to serve are listed in the third schedule to the Act and include Judges, Members of Parliament, certain public officers, members of the defence forces, clergymen, legal practitioners, magistrates, university

professors, police officers, doctors, dentists, pharmacists, opticians, physiotherapists, veterinary surgeons, newspaper editors and school teachers.

A jury list is compiled annually for each jury district. The names of persons included in the list are selected by computer process from the appropriate House of Assembly electoral rolls at the direction of the Sheriff. The jurors summoned to hear and determine an issue are later selected by ballot. Accused persons and the Crown each have the right to challenge three jurors without assigning reasons. About 1 800 persons serve on juries each year in South Australia. A jury pool system was instituted in 1974 and juries now may be required to serve in both the Supreme and District Criminal Courts during their month of service.

### STATE INDUSTRIAL TRIBUNALS

Industrial arbitration in South Australia was inaugurated in 1894 by the establishment of Boards of Conciliation. Since then the system has undergone fundamental changes from time to time and the present basis is the Industrial Code, 1967-1977, under which the Industrial Court, Industrial Commission, Conciliation Committees and Commissioners have been established. For details on the composition of these bodies and their functions see Part 7.2.

### LEGAL SERVICES COMMISSION

The Legal Services Commission, constituted under the provisions of the Legal Services Commission Act, 1977-1979, is responsible for the provision of all legal assistance in South Australia and provides free legal advice to any person.

The Commission provides legal advice in any matter as well as providing representation in court proceedings. These services are subject to a flexible means test, and to guidelines laid down from time to time. Legal services may be provided either by lawyers employed by the Commission or by private practitioners.

The Commission is administered by an independent statutory body which includes representatives from a variety of groups in the community. It is jointly funded by the State and Federal Governments and includes a Research and Education Section which is responsible for issuing pamphlets and other educational activities to advise people of their legal rights and duties.

The South Australian Law Society also conducts some evening legal advisory services, at no cost to pensioners and students, and at a nominal charge to others.

### CONSUMER PROTECTION

Consumer protection in South Australia, in common with the other States, is a responsibility divided between the Commonwealth and State Governments. The major arm of Commonwealth responsibility is the Trade Practices Commission; the relevant State instrumentality is the Department of Public and Consumer Affairs. In practice, the Trade Practices Commission intervenes only in multi-State matters or where exemplary legal action is called for. The State looks into matters involving consumer redress.

The South Australian Department of Public and Consumer Affairs was formed in 1976 from units of several existing departments. A number of branches of the new Department are involved in consumer protection work. The Consumer Services Branch, headed by the Commissioner for Consumer Affairs (formerly known as the Prices Commissioner), deals with the most general consumer complaints, and generally supervises sixteen Acts, including the Consumer Transactions, Manufacturers Warranties, Door to Door Sales, Unfair Advertising, Defective Houses, Second-hand Motor Vehicles, Fair Credit Reports, Prices, and Residential Tenancies Acts.

The following table shows an analysis of complaints investigated by the Consumer Services Branch during 1979.

**South Australian Department of Public and Consumer Affairs, Consumer Services Branch  
Analysis of Complaints, 1979**

Particulars	Complaints	
	Number	Per Cent
<b>Practice Complaints:</b>		
Advertising, representations .....	207	2.5
Packaging or labelling .....	25	0.3
Sales methods .....	413	5.0
Prices and charges .....	910	11.0
Quality of product or service .....	3 422	41.4
Credit practices .....	488	5.9
Contracts .....	1 893	22.9
Guarantees and warranties .....	861	10.4
Offers of redress .....	42	0.5
Total practice complaints .....	8 261	100.0
<b>Product complaints:</b>		
Food, beverages, tobacco .....	157	1.9
Clothing, footwear, drapery .....	356	4.3
Consumer durables .....	1 530	18.5
Motor vehicles and other transport equipment .....	1 926	23.3
Building and constructions .....	1 009	12.2
Miscellaneous products .....	951	11.5
Transport and energy services .....	256	3.1
Insurance and finance .....	777	9.4
Real estate and accommodation .....	786	9.5
Miscellaneous service .....	513	6.2
Total product complaints .....	8 261	100.0

The Standards Branch, headed by the Commissioner for Standards, specialises in matters relating to weights and measures, packaging and labelling. Included in the Standards Branch's administration are seven Acts, including the Packages, Goods (Trade Descriptions), Flammable Clothing and Trade Measurements Acts.

The Builders' Licensing Board licenses and supervises the conduct of builders offering their services.

The Commercial Tribunals Branch comprises several licensing and disciplinary authorities supervising various industries, including auctioneers, credit providers, land agents and used-car dealers.

Co-operation between the Commonwealth and South Australian authorities on a day-to-day basis ensures that overlapping and duplication of activities is kept to a minimum.

#### PUBLIC TRUSTEE

The office of Public Trustee was established in 1881 and is regulated by the Admini-

stration and Probate Act, 1919-1978. The Public Trustee provides a service to the public by preparing wills free of charge and in the administration of estates and in the protection of infants and absentee beneficiaries in estates administered by private administrators. A person may appoint the Public Trustee to be the executor and trustee of a will or as trustee of any disposition of property creating a trust.

The Public Trustee, where directed by the Court, becomes administrator of certain deceased estates; acts as guardian of certain infants; controls a protected person's property under the Aged and Infirm Persons' Property Act, 1940-1975; and receives, invests and distributes for the benefit of widows and minor dependants, amounts awarded under the Workmen's Compensation Act, 1971-1979.

Under the Mental Health Act, 1976-1979 the Public Trustee has control of the estates of some of the patients who have been admitted to Government mental hospitals, and may be appointed to act for the estate of any person found to be of unsound mind.

The Public Trustee may be appointed under a Power of Attorney or as an agent by any person to conduct their business affairs while they are alive and may continue to perform these duties even though the person may cease to have legal capacity at a later date.

The Public Trustee may be appointed as administrator of unclaimed property and as a custodian trustee.

#### THE SOUTH AUSTRALIAN POLICE FORCE

The police force was first established in South Australia in 1838 and has been administered by a Commissioner of Police since 1840. Since that time the Force has grown to such an extent that a Deputy Commissioner and three Assistant Commissioners have been introduced. Each Assistant Commissioner has control of one of three major areas of the Force which have been designated 'Crime and Services', 'Operations' and 'Personnel and Training'. The number of police officers rose steadily from 127 in 1851 to a peak of 802 in 1929, fell to 674 in 1943 and has since risen steadily to 3 093 in 1979.

Women police officers were introduced in 1915 giving the Force the distinction of being the first, in the then British Commonwealth, to do so. In that year two female officers were sworn in having equal rights with the male officers. By 1974 the number of women police officers had grown to thirty-six and at 30 June 1979 the number was 133.

The maintenance of law and order and the reduction of opportunities for criminal activity are the main functions of the uniformed branches. At 30 June 1979 there were thirty-three metropolitan regional and 109 country police stations and offices.

Police Personnel, South Australia<sup>(a)</sup>  
At 30 June

Personnel	1975	1976	1977	1978	1979
Commissioned officers .....	89	94	101	105	108
Non-commissioned officers .....	645	677	718	757	782
Constables .....	1 739	1 787	1 899	2 017	2 203
Total active police force .....	2 473	2 558	2 718	2 879	3 093
Persons per active member .....	506	493	473	448	418

(a) Active police force strength. Excludes trainees and cadets, women police auxiliaries, civil staff, etc.

The Traffic Region has recently completed decentralisation and now each metropolitan region has a complement of traffic police. Their duties include policing the general

regulations relating to road use, controlling traffic and improving road safety by ensuring the safe and efficient flow of traffic. Such services as speed detection, accident investigation and prevention, testing vehicles for road worthiness and lecturing on road courtesy and safety are still maintained by units stationed at the Thebarton Police Barracks. A Traffic Intelligence Centre, using information gained from accident statistics, assists in the correct placement of speed detection units in relation to accident action centres.

The Criminal Investigation Branch in Adelaide comprises a compact specialist unit responsible for the investigation of major crime or crimes involving an unusual expertise. Criminal Investigation Units are also placed in major metropolitan and country stations. To ensure that the activities of these units are co-ordinated, a Crime Intelligence Unit at Police Headquarters studies crime trends, and circulates relevant information. The Crime Director, a senior Commissioned Officer, is responsible for recommending the allocation of additional resources to any units requiring assistance. Auxiliary services provided by the Modus Operandi, Records, Fingerprints, Photographic, Documents, Ballistics, Crime Scene and Laboratory Sections are essential aids to criminal investigations.

On 30 November 1978, a Special Tasks and Rescue Force (STAR Force) was formed with headquarters at Police Barracks Thebarton. The primary function of the Star Force is to provide a mobile patrol force of trained personnel skilled in the use of firearms, anti-terrorist tactics, crowd control, crime prevention techniques, underwater recovery and search and rescue operations.

The following table gives details of the revenue and expenditure of the South Australian Police Force in recent years.

**South Australian Police Force, Revenue and Expenditure<sup>(a)</sup>**

Year	Expenditure			Revenue	Net Cost	
	Wages and Salaries	Other	Total		Total	Per Head
Dollars						
1974-75 .....	26 449 889	3 791 410	30 241 299	2 206 690	28 034 609	22.49
1975-76 .....	34 076 299	5 776 230	39 852 529	2 364 170	37 488 359	29.83
1976-77 .....	40 763 959	6 981 012	47 744 971	3 076 243	44 668 728	34.98
1977-78 .....	47 675 182	9 103 157	56 778 339	3 322 782	53 455 557	41.44
1978-79 .....	52 008 645	10 420 694	62 429 339	3 560 976	58 868 363	45.64

(a) As reflected in Consolidated Revenue Account only—capital expenditure is met from Loan Fund.

The changing role of the police in the community, together with continual changes in law and investigational techniques, has resulted in special emphasis being placed upon the training of all personnel within the Force. Applications for cadetship are accepted from the age of sixteen and a half years and training commences at seventeen years of age. Cadets are given a two-year course of academic and practical instruction before graduation to operational duties. Adults are enlisted between the ages of nineteen and twenty-nine years and are given twenty-six weeks instruction; they then serve a probationary period on general duties before being permanently appointed.

All personnel are required to undergo refresher and firearm training at selected intervals of service. In addition, courses are regularly conducted for such specialist appointments as prosecutors, detectives, technicians and instructors. At 30 June 1979 there were 226 cadets in training, including three trade apprentices, six cadet bandsmen,

and 64 adult recruits who had received training during the year. Formal instruction was given to 2 676 members in refresher, specialist, firearm and driver training courses during 1979.

In 1971 the use of light aircraft was instituted by the Department for the transport of personnel and prisoners throughout the State. Three aircraft are now in service; two based in Adelaide and the third at Woomera. The primary role of the Woomera based aircraft is to provide a more frequent police presence on the Aboriginal Reserves in the north-west of the State.

An extensive re-organisation of the general duty police in the metropolitan area was begun early in 1973. This involved the division of metropolitan Adelaide into three territorial regions, each commanded by a Chief Superintendent, the implementation of a sector system within these regions and the restructuring of patrol areas to give emphasis to personal contact between the patrol force and the general public. Portable UHF radio hand sets have been introduced to enable mobile and foot patrols to be in contact with each other and with their patrol base. In certain areas equipment, code named TARTA, has been developed to allow the patrolling officer to both make and receive telephone calls from the police vehicle via the Telecom exchange system. Telex and facsimile machines are also in use at certain main stations and within Police Headquarters. Developments are now being made to integrate the communications facilities with a computerised record retrieval system thereby greatly increasing the effectiveness of the force.

An Operational Planning and Support Unit, directly responsible to the Assistant Commissioner (Operations) and under the command of a Chief Superintendent was established in 1977. Its primary functions are to plan police requirements in providing security and crowd control measures for visits by Royalty and other dignitaries; prepare contingency plans to counter acts of terrorism and hijacking and to review and produce operational methods to assist Regional Commanders.

In February 1979, a Research and Development group was formed, directly responsible to the Commissioner of Police, under the command of a Chief Superintendent. The group brought together the previously separate units of Organisational Services, Special Projects Section, Computer Systems Section and a new Policy Section. Projects relating to manpower planning, organisation and methods, workload and productivity, operational research, demographic and sociological research, operational crime research, policy research and industrial relations liaison are carried out by this group. The Computer Systems Section is being used to explore the field of the computer's application to police oriented tasks.

In addition to the Research and Development group, each of the three Assistant Commissioners has a Command Planning Unit under his control to carry out research and make planning recommendations with specific reference to their commands. The Command Planning Units have access to the Research and Development Group to ensure consistent co-ordination.

The Police Community Affairs and Information Service was formed in 1973 to foster better relations between the police and the general public. An Aboriginal Liaison Officer (a police officer) is attached to this Section and deals directly with police/Aboriginal relations. In July 1975, a new branch known as the Inspectorate was set up primarily to inspect operational units and to investigate complaints against police. A Publications Section also functions within this unit to prepare and co-ordinate material for the updating and maintenance of Department Manuals and other publications.

Early in 1974, a Dog Squad of six handlers and six dogs became operational; it now comprises sixteen handlers and dogs. As well as carrying out foot and mobile patrol duties, the squad is used in tracking and drug searches.

Since the opening of the Eyre Highway in September 1976, two fully-equipped four-wheel drive vehicles have been used for daily patrols between Ceduna and the Western Australian border.

### CORRECTIONAL SERVICES

There were eight gaols and prisons and nine police prisons administered by the South Australian Department of Correctional Services during 1978-79. Adelaide Gaol is a holding centre for remand and short-term sentenced prisoners. Yatala Labour Prison, South Australia's largest prison, provides for long-term male prisoners under maximum, medium and minimum security ratings. Adjacent to Yatala is the Northfield Security Hospital which was officially opened in November 1973 to accommodate criminal mental defectives. This modern hospital is staffed by trained medical personnel and provides specialised treatment programs for both males and females. Port Augusta Gaol, Port Lincoln Prison and Mount Gambier Gaol are medium security prisons which accommodate male and female prisoners. Cadell Training Centre on the River Murray is a dual purpose institution which operates as a pre-release centre for long-term prisoners as well as accommodating minimum security short-term prisoners. The Women's Rehabilitation Centre at Northfield is a multi-purpose prison for females from all parts of the State. The nine police prisons serve as short-term detention centres for both males and females, and are mainly situated in the more remote country areas.

The emphasis in South Australian prisons is on rehabilitation. Industrial and trade training in various fields is available throughout the institutions, enabling prisoners to be prepared for eventual outside employment. A wide range of correspondence courses is available through the colleges of advanced education and the Open College of the South Australian Department of Further Education under the supervision of the prison education officers. Special migrant and remedial classes are also conducted by the Education Division of the Department. An assessment panel ensures that prisoners serving long-term sentences are correctly assessed for education, employment, social and other training purposes. In a wide range of matters affecting the well-being and after-care of prisoners and their families, the prison administration is assisted by chaplains, the Offenders Aid and Rehabilitation Society, the Salvation Army and other voluntary organisations. Community services rendered by prisoners include the provision of emergency fire service units and the production of soft toys for children's homes.

**Prisons: Persons received under Sentence**

Major Offence	1976-77		1977-78	
	Persons	Per Cent	Persons	Per Cent
Homicide .....	30	0.6	23	0.4
Assault .....	366	7.4	426	8.2
Robbery and extortion .....	27	0.5	34	0.7
Fraud, forgery and misappropriation .....	132	2.7	156	3.0
Theft, breaking and entering .....	703	14.1	776	15.0
Property damage .....	121	2.4	106	2.1
Driving and related offences .....	893	18.0	1 248	24.1
Drunkenness .....	1 108	22.3	724	14.0
Other offences .....	1 592	32.0	1 684	32.5
Total .....	4 972	100.0	5 177	100.0

### Probation and Parole

The Probation and Parole Branch continues to expand, both in staff numbers and in the decentralisation of services. District offices are located at Port Adelaide, Elizabeth, Gilles Plains, Christies Beach, Glenelg and Norwood in the metropolitan area and at Berri, Cadell, Gladstone, Whyalla, Port Augusta, Port Lincoln and Mount Gambier in the country. The Branch is responsible for providing supervision and social casework services to probationers and parolees. Social work graduates are providing a more professional social work service, including a wider range of treatment and management alternatives for offenders. Provision of pre-sentence social reports to the courts remains one of the major functions of the Branch.

## PUBLIC SAFETY FIRE SERVICES

### The Fire Brigades Board

Provision for the establishment and maintenance of fire brigades in South Australia under the control and management of the Fire Brigades Board was first instituted in 1882.

In accordance with its general duty of extinguishing fires and protecting life and property in case of fire, the Board maintains suitably equipped fire brigades in proclaimed fire districts in the Adelaide Metropolitan Area and in country towns. At 30 June 1979 there were forty-one fire brigade stations of which twenty-one were metropolitan and twenty were country. During the year 1978-79 these brigades received 7 624 calls of which 635 were false and malicious calls. Some of these brigades are manned by permanent personnel and others by auxiliary firemen, there being at 30 June 1979, 638 officers and firemen and 138 auxiliary firemen.

In addition to its main function, the Board provides a service section for the regular maintenance of private fire equipment installed in public and private premises, and makes its officers available for inspection of premises and for advice on fire protection generally, as well as to demonstrate the use and handling of various types of first-aid fire equipment.

The Fire Brigades Act, 1936-1976 provides that the expenses and maintenance of brigades be defrayed in the proportion of one-eighth by the State Treasury, three-quarters by insurance companies and one-eighth by the municipalities and district councils concerned.

Total contributions for 1978-79 were \$11 634 200 made up as follows; insurance companies \$8 725 650; municipalities and district councils \$1 454 275; and State Treasury \$1 454 275.

### South Australian Country Fire Services

The South Australian Country Fire Services (CFS) is a voluntary fire fighting organisation affording urban and rural fire protection to an area of 886 000 square kilometres, or approximately 90 per cent of South Australia.

The CFS had its beginning in 1939 as the South Australian Emergency Fire Services, a branch of Civil Defence formed during the 1939-45 War. When Civil Defence was disbanded, the Emergency Fire Services was developed into a volunteer country fire service to protect those areas outside the districts covered under the Fire Brigades Act, 1936-1976.

**South Australian Country Fire Services**

Particulars	Unit	1977	1978	1979
Strength of service at 30 June:				
Affiliated organisations .....	No.	456	466	466
Volunteer members .....	No.	10 500	11 000	11 000
Fires attended in twelve months ended 30 June:				
Number of fires:				
Urban type .....	No.	320	265	337
Bush .....	No.	935	736	1 190
Area destroyed in bush fires .....	Hectares	202 455	79 965	66 204
Financial losses:				
Urban type .....	Dollars	1 016 726	1 687 196	2 197 083
Bush .....	Dollars	186 985	288 698	2 220 773

The CFS is constituted as a statutory body under the Country Fires Act, 1976. The Act was assented to on 23 December 1976 and proclaimed on 2 June 1977, with the essential administrative sections becoming active and the remaining provisions being suspended until the Board was equipped to administer their functions.

The remaining sections of the Act came into operation on 13 September 1979. The Regulations under the Act are framed to preserve the fundamental character of the Bush Fires Act, 1960-1976 in its role in bushfires and certain fires in the open air.

Local government mandate and autonomy in areas outside South Australian Fire Brigade districts under the Fire Brigades Act, are retained with additional powers to issue permits to light fires which would otherwise be unlawful. The Act also enables the continuance of the long established policy of bushfire control being administered by the communities and authorities most concerned, and preserves the well understood and accepted custom of the direction of the public and law enforcement bodies by a distinctly relevant statute.

**LIFE SAVING****The Royal Life Saving Society—Australia**

The South Australian Branch of the Royal Life Saving Society—Australia was established in 1909 and the formation of clubs at various beaches followed. In 1952 an agreement was made with the Surf Life Saving Association whereby the Surf Life Saving Association undertook responsibility for life saving on ocean beaches, the Royal Life Saving Society retaining responsibility in all other areas of activity.

In South Australia the Society has developed into a large teaching body administered by a Council. The Society gives instruction to schools and other interested bodies in the various methods of life saving, including the current methods of artificial respiration. This is done by honorary instructors and examiners. It also conducts life saving patrols at inland waterways on weekends and public holidays during the warmer months. In the winter months the emphasis is on talks and demonstrations on resuscitation, but during the swimming season weekly life saving instruction and examination, and life saving demonstrations are conducted throughout the State. Awards totalling 32 697 were issued to candidates who passed the various examinations in the 1978-79 season.

The honorary work of the Society is financed mainly by grants made by the Government and by donations.

### The Surf Life Saving Association

The South Australian State Centre of the Surf Life Saving Association of Australia was formed in 1952, with the co-operation of the South Australian Branch of the Royal Life Saving Society and the Surf Life Saving Association of Australia.

The Association has nineteen affiliated clubs situated at Aldinga Bay, Brighton, Chiton Rocks, Christies Beach, Glenelg, Grange, Henley Beach, Hallett Cove, Moana, Port Elliot, Port Lincoln, Port Noarlunga, Seacliff, Semaphore, Somerton, Southport, Taperoo Beach, West Beach and Whyalla.

Voluntary members give many hours to patrolling their respective beaches on weekends and public holidays from the beginning of November until the end of March. At 30 June 1979 there were 1 394 members in Association clubs. From 1952 to the end of the 1978-79 season, 2 290 rescues were performed with no loss of life on patrolled South Australian beaches. During this same period many hundreds of persons received first-aid treatment.

The South Australian State Centre receives an annual grant from the State Government and individual clubs have been assisted with subsidies when building their club houses.

### 'Learn to Swim' Campaign

Vacation swimming classes organised by the Education Department were first established on an extensive scale in January 1956. Thirty-six country and fourteen metropolitan swimming centres were set up and over 7 000 children enrolled for instruction. The January 'Learn to Swim' campaign has been continued in each subsequent year and has grown steadily; in the summer vacation of 1978-79, 139 country and eighty-seven metropolitan swimming centres were used, and the total student enrolment was approximately 40 500. Instruction is provided over a period of ten days by qualified swimming instructors. Instruction in Surf Life Saving was offered for the first time in 1972 at eleven metropolitan and four country beaches, and a limited program continues at selected beaches.

Swimming classes have also been conducted in school time since October 1954; it is estimated that 65 000 and 52 000 children were enrolled in these classes in the first and third terms of 1979 respectively.

Although swimming is still a major part of the program, the Education Department has introduced a number of water safety skills into the 'Learn to Swim' campaign. All instructors are trained to teach water safety, life saving and swimming by the most up-to-date methods available. Since 1978 the Physical Education Branch has offered training to ensure that all swimming and aquatic instructors are trained in first aid.

Special Aquatic Centres commenced in 1975 with one centre based at Victor Harbor. In 1979, nine centres offered children such activities as surfing, canoeing, skiing, snorkelling, adventure boating and wind surfing.

### INDUSTRIAL ACCIDENT PREVENTION

The post-war growth of industrial activity in this State was accompanied by an increasing toll of injuries and fatalities sustained during the course of employment. Legislation requires certain minimum standards of safety in working conditions to be provided in various industries, and inspections are made to ensure compliance with legislative requirements. However, legislation and inspection are not the only means of minimising industrial accidents and in the late 1950s the South Australian Government implemented a program of education for management, supervisors and employees in

accident prevention measures, with the object of making all sections of industry more 'safety conscious'.

Safety officers employed in the Department of Industrial Affairs and Employment conduct safety training courses, present lectures, screen films and distribute industrial safety pamphlets produced within the Department.

In addition the Safety Engineering Society of Australasia, the Australian Institute of Management (Adelaide Division), the South Australian Institute of Technology and the Commonwealth Department of Employment and Youth Affairs make valuable contributions within their particular spheres of activities to the promotion of industrial safety.

#### NATIONAL SAFETY COUNCIL OF AUSTRALIA SA DIVISION

The National Safety Council of Australia SA Division was formed in 1963 as the Industrial Accident Prevention Society of SA Inc., a voluntary non-profit educational body. It is an autonomous branch of the largest organisation in Australia devoting its entire resources to the reduction of accidents in most areas of the community. In South Australia the Council's efforts are devoted to occupational, child and home, and water safety problems; traffic safety being the function of the Road Safety Council of South Australia. The SA Division is also responsible for servicing the requirements of members in the Northern Territory and regular visits are made to that area for safety training and promotional purposes.

The aims of the Council are carried out by the provision of safety consultant services, lectures, training courses and the distribution of safety publications and materials. Finance is derived from membership fees, services, an annual grant from the State Government and assistance from the Commonwealth Government. The Council's activities are controlled by a body representative of all spheres of community interest.

#### ROAD SAFETY COUNCIL OF SOUTH AUSTRALIA

The Road Safety Council of South Australia was formed in December 1965. The Council appointed by State Cabinet consists of an independent chairman and eleven members representing the Minister of Transport, the National Council of Women, the Road Traffic Board, the Police Department, the Royal Automobile Association of South Australia, the Local Government Association (two representatives), the Education Department, the State Transport Authority, the United Trades and Labor Council of South Australia, the Australian Medical Association, and the State Government Insurance Commission.

The objectives of the Council are to prevent road accidents involving death, injury or property damage through united action by all sections of the community, and to advise and assist government, semi-government and local authorities as well as private organisations in the adoption of precautionary measures in an attempt to prevent such accidents. In its efforts to achieve its objectives the Council concentrates on the education of road users in correct practices.

The Council is a section of the Department of Transport. Its administrative headquarters are at the Road Safety Instruction Centre at Oaklands Park. The facilities of the Centre include lecture rooms and instructional areas for children and licensed drivers of all classifications and age groups. Appropriate courses in road safety education and driver re-education are conducted.

The Council's operations are financed from part of the driver's licence fees under the Motor Vehicles Act, 1959-1978.

## 6.2 EDUCATION

Educational services are available to all South Australians in a wide variety of forms, some being provided by Government and others by non-government agencies. Constitutionally education is a State responsibility, but the Commonwealth makes grants for specific purposes. Education in this State can be seen as comprising three levels, namely, pre-school, school and post-school.

Pre-school education is co-ordinated by the Childhood Services Council and consists of a range of services available to young children (under five years of age) and their parents.

In South Australia attendance at school is compulsory for children from six to fifteen years of age. No child may be admitted to a government school, other than a child/parent centre, before the age of five years. The admission of children aged five is provided for in all junior primary schools at the beginning of each school term, but schools are encouraged to receive intakes more frequently.

Education at the primary and secondary level is available at government schools controlled by the Education Department and at non-government schools, most of which are denominational. Some non-government schools provide boarding facilities. In both government and non-government schools there has been a trend towards co-education in recent years. The term 'year' is used to denote class level in both primary and secondary schools. Primary classes are designated Year 1 through to Year 7, and secondary classes Year 8 to Year 12.

South Australian schools celebrated the centenary of State education in October 1975. The present system of government schools and of compulsory education dates from the Education Act, 1875.

At the tertiary level the University of Adelaide, the Flinders University of South Australia and the colleges of advanced education are independently controlled but are financially dependent on government grants.

Facilities for adult education are provided by the Department of Further Education, the Workers Educational Association, Department of Continuing Education of the University of Adelaide, and Flinders University.

A historical summary of education in South Australia was included on pages 153-4 of the *South Australian Year Book* 1969.

### PRE-SCHOOL EDUCATION

From its founding in 1905 until 1945, the Kindergarten Union of South Australia concentrated its efforts on the care and education of under-privileged children, but since 1945 the emphasis has shifted to the provision of pre-school education for all children.

Although some private organisations continue to run pre-schools the majority of kindergartens in South Australia are under the direction of the Kindergarten Union of South Australia.

In 1979 the Kindergarten Union was supervising 292 subsidised kindergartens and three mobile units, with a total enrolment of 19 242 children. Teaching staff for these numbered 675 out of a total employment figure of 1 052 persons.

While the supervision covers various aspects of organisation it is largely concerned with the educational program. As well as encouraging the creative, physical and mental development of four to five-year-old children the kindergarten prepares them for the experiences of formal schooling. Sessions are generally of two and a half to three hours duration each day with enrolments limited to thirty children a session; two sessions are held daily at most kindergartens. The work of kindergartens has been expanded to a

wider pattern of child care to encompass extended hours care, playgroups and resource facilities for the community. The Kindergarten Union now operates some twenty Resource Centres and nine Mobile Resource Units.

The Kindergarten Union became a statutory authority in 1975 receiving its funding from the Commonwealth and State Governments through the South Australian Childhood Services Council. This revenue covers teachers' salaries, capital building programs and most of the kindergartens' operating costs. Local committees are expected to raise a proportion of the day-to-day operating costs and, to a degree, provide some of the 'extras' needed. Such extra revenue generally comes from fund-raising activities.

The annual recurrent budget of the Kindergarten Union for the financial year to 30 June 1980 was \$10.4 million. Approximately \$0.6 million was allocated for capital building work, providing for the construction of new centres and the rebuilding of a number of existing kindergartens.

In 1974 the Education Department established pre-school centres, now known as child/parent centres. These centres are staffed by Education Department teachers and are usually located in the grounds of existing junior primary, primary and area schools.

There are 83 child/parent centres serving approximately 5 000 children and their families. Of these child/parent centres, eleven cater for Aboriginal children in rural areas, one caters for children requiring special education and ten are integrated services centres which are co-operative ventures with the Department for Community Welfare, the South Australian Health Commission, the Kindergarten Union and local community services. Four of these are child/parent resource centres located at Alberton, Christies East, Elizabeth West and Whyalla. The Port Augusta Primary School is the base for the Remote and Isolated Children's Exercise (RICE) to serve children and their families in the outback.

The Childhood Services Council co-ordinates the development of early childhood services in South Australia. These services include child care; child health centres; the child/parent resource centre; family day care; kindergartens, pre-schools and child/parent centres; parent education; playgroups; and toy libraries.

The following table shows statistics on all known day care centres and pre-school centres in South Australia. These statistics have been obtained from a census conducted by the Australian Bureau of Statistics during the week commencing 30 July 1979.

**Day Care Centres and Pre-school Centres, South Australia, 1979<sup>(a)</sup>**

Particulars	Type of Centre				Total
	Kindergarten Union	Licensed by Department for Community Welfare	Government Schools	Other	
Number of centres .....	292	85	80	30	487
Capacity (per session) ....	9 493	3 244	1 888	734	15 359
Attendance:					
Boys .....	10 607	2 058	2 641	306	15 612
Girls .....	9 943	1 941	2 543	339	14 766
Total .....	20 550	3 999	5 184	645	30 378
Paid staff <sup>(b)</sup> :					
Qualified .....	675	317	165	66	1 223
Unqualified .....	377	209	103	23	712
Total .....	1 052	526	268	89	1 935

(a) Week commencing 30 July 1979. (b) Includes part-time.

**GENERAL SCHOOL EDUCATION**

The State Government, through the Education Department, provides free facilities for primary and secondary education; however, parents may choose between government and non-government schools. The Education Department functions under the Minister of Education. The permanent head of the Department is the Director-General of Education, assisted by two Deputy Directors-General of Education and Directors of Personnel, Curriculum, Educational Facilities, Research and Planning, and Management and School Services. The Department is organised into ten Education Regions and schools are administered in many aspects through the local Regional Director. A Director-General of Further Education heads the Department of Further Education which is responsible for a wide range of post-secondary educational activities conducted by community colleges and colleges of further education in all areas of the State.

The work of the schools is materially assisted by the school councils, and also by the mothers clubs, parents and friends associations and welfare clubs. For many years these bodies have been instrumental in raising large sums for the purchase of additional amenities for schools.

In country areas many children are conveyed to government schools by free bus services provided by the Education Department. At the end of 1979 there were 690 bus services carrying an average of 26 000 students daily to 350 schools.

Although non-government primary schools largely follow the government schools in their curricula, the Education Department exercises no formal authority over these schools beyond requiring them to submit certain statistical returns relating to compulsory attendance. The similarity between courses in the government and non-government secondary schools is attributable to the influence of the Public Examinations Board of South Australia syllabus and the close liaison of the administration and teachers of both types of school.

The Catholic school system is organised on a State-wide basis under the direction of the South Australian Commission for Catholic Schools. This Commission is comprised of the Archbishop of Adelaide, the Bishop of Port Pirie, priests, primary and secondary school principals, superiors, parents, teachers (lay and religious), members of school boards and regional members together with the Director of Catholic Education and the Co-ordinators of Primary and Secondary Education.

The State Government now pays a grant of \$10 a year for each primary and \$20 for each secondary student liable to pay fees at an approved non-government school. In 1979 additional payments on a needs basis varying from \$158 to \$360 per student were made to some schools.

**Schools**

Details of schools operating in South Australia in 1979 are given in the next table. The average size of government schools has increased rapidly since 1940 partly as a result of the consolidation of country schools. There were 632 government schools in 1979 compared with 1 043 in 1940 and 1 108 in the peak year of 1935. In 1940 there was an average of 73 students to each government school, with this figure increasing to 125 by 1950, 255 by 1960 and 351 by 1970. After peaking at about 379 between 1972 and 1975, the figure declined to 355 in 1979. There has been a general increase in the average size of non-government schools.

**Schools by Size, South Australia**  
**At 1 August 1979**

Students on Roll	Government Schools				Non-government Schools	
	Primary	Primary-Secondary	Second-ary	Special (a)	Total	Non-government Schools
Under 21 .....	24	—	—	2	26	3
21 to 35 .....	40	1	—	6	47	10
36 to 100 .....	94	13	—	10	117	32
101 to 200 .....	49	12	5	3	69	40
201 to 300 .....	39	14	6	1	60	23
301 to 400 .....	45	9	7	—	61	11
401 to 600 .....	85	11	20	—	116	22
601 to 800 .....	55	1	21	—	77	8
801 to 1 000 .....	15	1	22	—	38	5
1 001 to 1 200 .....	2	—	14	—	16	1
1 201 to 2 000 .....	—	—	5	—	5	—
Total .....	448	62	100	22	632	155

(a) Schools for physically and mentally handicapped, socially maladjusted or emotionally disturbed children.

### Students

Enrolments in recent years, classified by government and non-government schools and by age of the students are given in the following tables.

**Primary and Secondary Students, South Australia**  
**At or about 1 August**

Age	Government Schools			Non-government Schools		
	1977	1978	1979	1977	1978	1979
Under 6 .....	19 007	17 893	16 669	3 076	3 146	3 121
6 .....	21 137	20 010	18 753	2 850	2 795	2 696
7 .....	20 422	21 081	19 739	2 767	2 856	2 912
8 .....	20 395	20 242	20 873	2 855	3 002	2 998
9 .....	19 678	20 111	20 079	2 895	2 900	3 045
10 .....	19 133	19 653	19 917	2 992	2 984	3 047
11 .....	19 516	18 786	19 157	3 108	2 922	3 178
12 .....	19 597	19 121	18 347	3 426	3 439	3 338
13 .....	20 272	19 381	18 645	3 591	3 537	3 704
14 .....	20 217	19 738	19 055	3 676	3 629	3 591
15 .....	17 187	17 490	16 956	3 420	3 576	3 616
16 .....	11 271	11 579	11 058	3 014	2 954	3 044
17 .....	4 379	4 398	4 290	1 508	1 442	1 426
18 .....	786	728	753	236	216	214
19 .....	153	172	159	21	43	21
20 and over .....	60	72	75	11	—	21
Total .....	233 210	230 455	224 525	39 446	39 441	39 972

**Primary and Secondary Students, South Australia  
At 1 August 1979**

Age	Government Schools			Non-government Schools		
	Primary	Secondary	Total	Primary	Secondary	Total
Under 6 .....	16 669	—	16 669	3 121	—	3 121
6 .....	18 753	—	18 753	2 696	—	2 696
7 .....	19 739	—	19 739	2 912	—	2 912
8 .....	20 873	—	20 873	2 998	—	2 998
9 .....	20 079	—	20 079	3 045	—	3 045
10 .....	19 917	—	19 917	3 046	1	3 047
11 .....	19 119	38	19 157	3 121	57	3 178
12 .....	10 112	8 235	18 347	1 499	1 839	3 338
13 .....	815	17 830	18 645	123	3 581	3 704
14 .....	153	18 902	19 055	11	3 580	3 591
15 .....	132	16 824	16 956	5	3 611	3 616
16 .....	95	10 963	11 058	2	3 042	3 044
17 .....	125	4 165	4 290	3	1 423	1 426
18 .....	108	645	753	2	212	214
19 .....	86	73	159	7	14	21
20 and over	18	57	75	—	21	21
Total .....	146 793	77 732	224 525	22 591	17 381	39 972

### Teachers

The numbers of teachers employed in primary and secondary schools in recent years are shown in the following table.

### Teachers, South Australia

At or about 1 August	Government Schools				Non-government Schools			
	Full-time		Part-time (a)		Full-time		Part-time (a)	
	Males	Females	Males	Females	Males	Females	Males	Females
1977 .....	5 889	7 752	59	425	711	1 086	52	221
1978 .....	6 155	7 756	52	513	756	1 118	51	228
1979 .....	6 207	7 630	104	663	824	1 184	43	245
Type of Teacher 1979								
Primary .....	2 331	5 065	23	319	223	734	12	95
Secondary .....	3 764	2 394	79	325	600	421	30	144
Special (b) .....	112	171	2	19	1	29	1	6

(a) Equivalent full-time units of part-time teaching. Total part-time teachers at 1 August 1979, government schools, 184 males and 1 171 females; non-government schools, 90 males and 473 females.

(b) Includes schools for physically and mentally handicapped, socially maladjusted or emotionally disturbed children.

### PRIMARY EDUCATION

Children normally begin their schooling at the age of five years when they enrol for primary education at either a government or non-government school. Primary education involves a seven-year course.

### GOVERNMENT SCHOOLS

Metropolitan children attend primary schools while country children normally attend a primary, rural, area or special rural school, although those in remote areas may receive lessons by correspondence.

#### **Primary**

In the first two years of school the emphasis is on the child's active involvement in learning. The curriculum is designed to extend children's experience of their environment through social studies, science and mathematics. It provides for the development of language skills, especially fluency in speech and reading, and for creative activities in movement, music, art, drama and writing.

The primary school curricula provide a general framework for the study of English, mathematics, social studies, science, health education, music, art and craft and physical education. A new program in religious education is being tested. An increasing provision is being made for the study of elective subjects, such as foreign languages, ballet, instrumental music and aquatics.

Ancillary services and expert advice are provided for primary schools through the Principals of the Educational Technology Centre and the School Libraries, Physical Education and Music Branches. There are also consultants in all the basic subjects who visit the schools and conduct in-service courses.

#### **Area and Special Rural**

These schools, situated in country centres, cater for both primary and secondary students. The primary course is similar to that of the primary schools but the secondary courses offered are restricted by the availability of staff.

#### **Correspondence**

The Correspondence School was started in 1920 to cater for children unable to attend ordinary schools. Most of these children live in remote parts of South Australia or are unable to attend school through physical or emotional disability. The service also reaches itinerant families and those travelling overseas. Secondary courses are also offered to children attending a school at which a specific subject is not available.

The following table shows the number of students in government schools by year of primary education in recent years.

**Primary Students: Government Schools, South Australia**

Year of Education	1974	1975	1976	1977	1978	1979
'000						
Reception .....	(a) 7.1	6.6	7.6	7.3	6.9	6.6
Year 1 .....	20.7	21.8	21.3	20.7	19.8	18.1
Year 2 .....	20.0	20.8	21.5	22.0	21.2	20.1
Year 3 .....	19.7	19.7	20.2	21.0	21.1	20.5
Year 4 .....	20.1	19.5	19.4	20.2	20.5	20.9
Year 5 .....	20.3	20.0	19.4	19.4	20.0	20.2
Year 6 .....	20.9	20.3	19.7	19.4	19.1	19.6
Year 7 .....	21.4	20.7	20.0	19.7	19.1	18.7
Ungraded special(b) .....	2.7	2.5	2.4	2.3	2.3	2.2
Total primary students ....	152.9	151.9	151.5	152.0	150.0	146.8

(a) Before 1975 includes pre-school children.

(b) Includes students in opportunity classes at other than special schools.

Port Augusta School of the Air was given autonomy from the Correspondence School, with its own Principal, in 1976. It provides two-way radio contact and various other services to facilitate personal interaction. Written work is marked by staff of the School of the Air and the Correspondence School. Co-operation between the Correspondence School and the Broken Hill School of the Air assists with education of children living on the New South Wales-South Australian border. In 1979, 451 children were enrolled to receive primary education at these schools.

#### NON-GOVERNMENT SCHOOLS

At 1 August 1979, 22 591 children were receiving primary education at non-government schools. The majority of these children were attending Catholic schools.

##### Catholic

Many children receiving primary education in the Catholic school system attend parish schools while the remainder attend colleges conducted by religious orders. Both types of school are supported by fees paid by parents and by State and Commonwealth Government grants. Parish schools are the property of the parishes which are responsible for equipping and maintaining them. The educational program of each school is under the direction of the principal, who may be either a lay person or a member of a religious order, and who is usually assisted by an elected school board.

##### Other

Several denominational bodies including the Church of England, the Lutheran Church and the Seventh Day Adventist Church conduct primary schools; there are also two non-denominational primary schools. Primary education is provided together with secondary education at primary/secondary schools conducted by denominational bodies including the Church of England and the Uniting Church, and at three non-denominational schools.

#### EDUCATION OF HANDICAPPED CHILDREN

The Special Education Section of the Education Department provides education for handicapped children in a variety of settings. The general policy is that children should be educated in the most 'ordinary' situation possible and that a range of options should be available. Options provided include special schools, full-time special classes, part-time special classes, support teachers within ordinary schools helping children and teachers in regular classes, and support teachers working outside their home base schools. In addition, a variety of arrangements are entered into in which groups of handicapped children and their teachers are combined with regular groups and their teachers in a single complex. Specific provisions are made for hearing-impaired children (all within centres in regular schools), visually-impaired children (one small special school plus support services), moderately mentally retarded children (mostly in special schools but occasionally in special or regular classrooms), physically handicapped children (in both special and regular schools) and others.

Special schools are conducted for day students and within institutions for children in residence.

#### SECONDARY EDUCATION

Children who have completed their primary schooling are required by law to attend a secondary school, either government or non-government, until their fifteenth birthday.

### GOVERNMENT SCHOOLS

The South Australian Education Department's policy is to provide comprehensive co-educational high schools which, consistent with their size and enrolment, offer the widest range of courses possible in an endeavour to meet the interests of the students.

Students living in urban areas usually attend their local high schools which, apart from four schools, are now comprehensive, co-educational schools. A program to give students a wider choice of schools commenced in 1978 and became fully operational in 1980. In country areas, secondary education is provided by special rural schools, area schools or high schools depending on the size of the population being served. The curriculum available may be supplemented by the services of the Correspondence School.

All new schools built in recent years, and some existing schools, have been provided with gymnasiums and music and drama areas. The upgrading of schools and the provision of open-plan units in existing schools is continuing.

#### Secondary Students: Government Schools, South Australia

Year of Education	1974	1975	1976	1977	1978	1979
'000						
Year 8 .....	21.8	21.7	20.9	20.3	19.7	18.7
Year 9 .....	20.8	21.3	20.8	20.3	19.9	19.1
Year 10 .....	17.7	18.6	19.0	18.8	18.7	18.1
Year 11 .....	13.1	14.3	14.2	14.6	15.0	14.5
Year 12 .....	5.5	6.2	6.6	6.4	6.6	6.7
Ungraded special(a) .....	0.7	0.6	0.6	0.7	0.6	0.7
Total secondary students .....	79.6	82.7	82.1	81.1	80.5	77.7

(a) Includes students in opportunity classes at other than special schools.

The first three years of secondary schooling provide a broad general education and during this period students are introduced to as wide a range of subjects as possible. Each school is free to develop its own combination of subjects and to determine the amount of time spent on each.

Specialisation increases in Years 11 and 12 when students tend to identify more clearly their vocational goals. However, the ability of schools to cater for diverse interests and capacities may be limited by their resources.

#### Area Schools

Area schools, which are located in some country districts, include a secondary section as well as primary. Because of their size the secondary curriculum offered may not be as varied as that of a large metropolitan high school, but a similar breadth and balance is sought.

#### Special Rural Schools

These schools were first established in remote country areas in 1966 with the intention of supplying a limited secondary education in areas where it had been shown that there was an obvious need for secondary education but where the establishment of an area school was not warranted. Courses in these schools are restricted to the core subjects, English, social studies, mathematics, science—sometimes craft where facilities are

available, and geography and/or history. Instruction usually does not proceed beyond Year 10 level.

### **Correspondence School**

Children who are unable to attend a secondary school may receive secondary education through the Correspondence School. Lessons are forwarded to cover eighteen academic subjects (all to Year 11 standard), and also certain art subjects. Assistance may take the form of full correspondence or supplementary courses. Supplementary courses are conducted through a primary school head teacher who may, in the case of remoteness from secondary school facilities, conduct grades beyond Year 7. Courses are also supplied to students in smaller secondary schools who wish to do a specific subject which is not available because of staffing problems.

Students who wish to do matriculation studies (Year 12) are enrolled through the South Australian Open College.

### **The Curriculum**

The aim of all secondary schools is to provide courses of study that best suit the needs of individual students. This has resulted in schools offering as wide a range of subjects and syllabuses as possible.

Secondary school subject curriculum committees, which are comprised of representatives of a wide spectrum of interests associated with education, meet regularly to discuss courses of study and to establish new syllabuses for secondary students. Although syllabuses are distributed to all teachers, they are in no way prescriptive. They are adapted to cater for the needs and abilities of students.

### **School Libraries in South Australia**

During the past decade there has been a rapid improvement in the quality of library service in South Australian schools. This has been caused by a combination of factors including the provision of trained teacher-librarians in most schools and multiple professional and support staff in the larger schools; the upgrading of education and in-service training courses for teacher-librarians; and the development of support and advisory services in the School Libraries Branch and at the regional level. School libraries have changed in concept from book-oriented libraries to multi-media resource centres containing a large range of print and non-print materials which provide students and staff flexibility in choosing the medium best suited to their needs at a particular time.

Libraries in government schools have the central support services of the School Libraries Branch of the Education Department to assist them. Services offered include central cataloguing, book reviewing and selection, a quarterly professional publication, *Review*, and a central library and bulk loan scheme as well as an advisory service to principals, teachers and librarians. Important among the support services is computer based cataloguing which commenced late in 1978.

### **Government Schools: Library Statistics, South Australia**

Particulars	Unit	1976	1977	1978	1979
Teacher-librarians .....	No.	512	521	549	561
Library aides .....	No.	185	335	514	620
Books held .....	million	2.9	3.2	3.4	4.6
Other materials .....	million	<i>n.a.</i>	1.5	2.1	2.4
Amount spent .....	\$ million	1.12	1.59	2.17	2.13

## NON-GOVERNMENT SCHOOLS

Secondary education is also provided by non-government schools; these schools, for the most part, are identified with various religious denominations. Non-government secondary schools usually charge fees, but a limited number of internal scholarships are available. In addition to normal day attendance some non-government schools offer boarding facilities for country students. Non-government schools provide academic courses preparing students for the Public Examinations Board examination at the Year 12 level. Church schools give religious as well as secular education.

In the next table non-government school students are classified according to the denominational affiliation of the school they attended. The predominant contribution of Catholic schools is clearly evident from the table. In 1979 Catholic schools accounted for 75 per cent of primary students and 60 per cent of secondary students attending non-government schools.

**Students at Non-government Schools, South Australia**  
At or about 1 August

Denomination of School	1975	1976	1977	1978	1979
<b>Primary:</b>					
Catholic (a) .....	17 662	17 666	17 594	17 120	16 907
Church of England .....	1 347	1 375	1 483	1 513	1 587
Lutheran .....	1 359	1 411	1 504	1 726	1 868
Seventh Day Adventist .....	183	187	222	237	236
Uniting Church (b) .....	987	965	1 025	1 083	1 147
Other .....	—	—	—	136	212
Non-denominational (a) .....	529	573	533	538	634
Total primary .....	22 067	22 177	22 361	22 353	22 591
<b>Secondary:</b>					
Catholic .....	9 584	9 845	9 941	10 143	10 416
Church of England .....	2 216	2 193	2 121	2 056	2 050
Lutheran .....	980	994	951	926	902
Seventh Day Adventist .....	138	140	152	154	176
Uniting Church (b) .....	2 715	2 592	2 548	2 401	2 430
Other .....	—	—	—	14	30
Non-denominational .....	1 185	1 358	1 372	1 394	1 377
Total secondary .....	16 818	17 122	17 085	17 088	17 381

(a) Includes students at special schools.

(b) From 22 June 1977 the Congregational, Presbyterian and Methodist Churches combined to form the Uniting Church in Australia.

**Catholic**

The Catholic school system provides secondary education at boarding and day colleges in metropolitan and country areas. The schools seek to serve the needs of students by providing (where appropriate) courses in technical education, business and commercial education and general education together with academic courses for those seeking admission to tertiary education after matriculation (Year 12). The majority of Catholic secondary schools are owned and operated by the religious communities who conduct them and are supported by fees charged and government grants.

**Other**

The Lutheran Church and the Seventh Day Adventist Church conduct secondary schools and there are three non-denominational secondary schools. Secondary education is provided also at primary/secondary schools (see page 179).

Training in typing and shorthand is provided at privately owned business colleges which specialise in this field. A number of these colleges also prepare students in certain Public Examinations Board subjects.

**Summary**

The following table gives details of all non-government schools and covers both primary and secondary education. Additional information is shown in the tables on pages 179-80.

**Non-government Schools, South Australia**

Year	Number of Schools	Number of Teachers (a)	Students on Roll at or about 1 August					
			Primary (b)		Secondary		Total	
			Males	Females	Males	Females		
1975 .....	151	1 900	10 996	11 071	8 118	8 700	38 885	
1976 .....	147	1 989	11 055	11 122	8 207	8 915	39 299	
1977 .....	145	2 070	11 150	11 211	8 043	9 042	39 446	
1978 .....	151	2 152	11 206	11 147	8 041	9 047	39 441	
1979 .....	155	2 296	11 365	11 226	8 274	9 107	39 972	

(a) Full-time teachers plus the full-time equivalent of part-time teachers.

(b) Includes students at special schools.

**EXAMINATIONS AND EDUCATION ASSISTANCE****Examinations**

In addition to internal examinations conducted by the schools the Public Examinations Board (PEB) conducts a further examination at the completion of the fifth year of secondary education. Before 1966 this examination had been known as the Leaving Honours examination and while considered a desirable fore-runner to university study had not been compulsory for entrance to the University of Adelaide (matriculation being based on the Leaving examination). Commencing with 1966 this examination became the Matriculation Examination.

Before 1966 the PEB had given a certificate for a pass in the required number of subjects at either the Intermediate or Leaving examinations and for a pass in one or more subjects in the Leaving Honours examination. From 1966 the Board has issued to each Intermediate and Matriculation examinee a certificate showing the grade achieved in each of the subjects in which examined. The last PEB Intermediate examination was held in 1968 and the last Leaving examination in 1974. The total number of candidates who presented for examination by the Board in one or more subjects at the 1979 Matriculation Examination was 9 701.

**Matriculation Examination: Candidates and Success Rate, South Australia**

Particulars	1975	1976	1977	1978	1979
Candidates sitting (a) .....	7 899	7 980	7 753	7 537	7 517
Candidates successful .....	4 758	4 763	4 797	4 866	4 957
Success rate (per cent) .....	60.24	59.69	61.87	64.56	65.94

(a) Number of candidates sitting for a Matriculation group of subjects. Some candidates sit for a lesser number of subjects which, by themselves, would not qualify for Matriculation status.

**Matriculation Examination: Candidates, Subjects Presented and Grade of Results  
South Australia, 1979**

Subject	Candidates	A Grade	B Grade	C and D Grades	E to G Grades
			NUMBER		
Art .....	1 091	76	225	521	269
Asian languages ( <i>a</i> ) .....	201	94	22	50	15
Australian History .....	1 661	179	421	765	296
Biology .....	5 385	439	1 169	2 585	1 170
Chemistry .....	2 707	614	1 070	833	190
Classical Studies .....	1 434	173	371	675	215
Economics .....	2 789	233	628	1 312	616
English .....	6 006	623	1 533	2 850	1 000
Geography .....	3 432	250	722	1 659	801
Geology .....	1 557	63	285	778	431
History ( <i>b</i> ) .....	776	94	207	357	118
Latin .....	13	9	1	2	1
Mathematics 1 .....	2 256	583	915	643	115
Mathematics 2 .....	2 255	587	925	592	151
Mathematics 1S .....	2 667	132	716	1 301	518
Modern European History .....	2 315	261	615	1 053	386
Music .....	466	57	140	214	55
Physics .....	2 769	614	1 100	857	198
Other modern languages ( <i>c</i> ) .....	1 136	233	366	448	87

(*a*) Chinese, Indonesian, Japanese, Malaysian.

(*b*) American History, Ancient History, Medieval History, Modern World History.

(*c*) Dutch, French, German, Hungarian, Italian, Latvian, Lithuanian, Greek, Polish, Russian, Spanish, Ukrainian.

### PRIMARY AND SECONDARY EDUCATION ASSISTANCE

The Commonwealth Government, the State Government and various private benefactors provide assistance to various categories of primary and secondary students.

#### South Australian Government

Text books are provided to all primary schools for student use. In 1979, the approximate value of books issued to schools varied between \$9.75 and \$12.30 per student, depending on the size of the school.

A grant of \$42 a student is paid to all government and non-government secondary schools to assist parents with the cost of books and materials. In all government secondary schools and some non-government secondary schools, books and materials bought from the grant become school property and are loaned for school use.

Students who have to travel considerable distances to the nearest school, or school bus, may also receive travelling expenses.

If students are forced to live away from home, an isolated children's allowance is normally payable by the Commonwealth Government. In a few cases where Commonwealth assistance is not available the South Australian Government pays boarding allowances and may award rural scholarships.

#### Commonwealth Government

The Scheme of Assistance for Isolated Children assists the parents of students who do not have reasonable daily access to an appropriate government school. The main aim of this scheme is to assist student children whose homes are geographically isolated.

However, assistance is also available in certain circumstances to handicapped children who must attend special schools or study by correspondence and to students undertaking a special type of course or specialised remedial teaching. Students who must live away from home to undergo diagnostic testing of an educational nature may also be assisted, as may students from itinerant families.

The Secondary Allowances Scheme aims to provide assistance to families with a limited income so that they may maintain their children at school for the final two years of secondary education. Under this scheme an allowance of up to \$550 a year may be paid subject to a means test.

The Commonwealth Government also provides financial assistance for the education of students of Aboriginal or Torres Strait Island descent who attend approved schools. This assistance is provided under the Aboriginal Secondary Grants Scheme. The grants are open to full-time students under the age of twenty-one who attend an approved secondary school. Grants also may be made available to full-time students who attend an approved primary school provided the student is fourteen years of age but under twenty-one years. Benefits under this scheme comprise textbook and uniform allowances, living allowance, personal allowance and fees. Students who must live away from their normal place of residence in order to attend school are eligible for a boarding allowance in lieu of living allowance, and for up to three return journeys to their home each year.

#### **TERTIARY EDUCATION ASSISTANCE**

In 1974 the Commonwealth Government abolished tuition fees at universities, colleges of advanced education, and technical colleges and introduced the Tertiary Education Assistance Scheme.

The Tertiary Education Assistance Scheme is intended to assist students in approved courses at universities, colleges of advanced education, technical colleges and certain other approved tertiary institutions in Australia. Assistance under the scheme may include payment of living allowance, incidentals allowance, allowance for a dependent spouse and/or child, and fares allowance. All benefits are subject to a means test and a student must be eligible for living allowance in order to receive any of the other benefits. The maximum amount of living allowance payable is \$2 348 a year for independent students. Students eligible to receive living allowance at the away from home rate and students living at home may receive up to \$2 075 or \$1 250 a year respectively. In addition, each grantee may receive up to \$273 in lieu of family allowance paid in respect of the dependant student by the Department of Social Security.

The Commonwealth Teaching Service Scholarship is being phased out and no further awards will be made.

Aboriginal Study Grants are available for students of Aboriginal and Torres Strait Islands descent who wish to study further after leaving school. Benefits include a living allowance and a textbook and equipment allowance.

Awards are also available for postgraduate study either in research or in course work. Assistance is by means of tax free allowances paid to award holders. The allowances payable consist of a living allowance, an incidentals allowance and under certain circumstances special allowances in respect of dependants, cost of travel, cost in setting up residence, and a contribution to costs associated with the production of a thesis. The living allowance payable to an award holder with no dependents is \$4 200 a year.

### OTHER ASSISTANCE

Under the Adult Secondary Education Assistance Scheme the Commonwealth Government provides assistance to adult students undertaking one year full-time matriculation level courses at technical colleges, secondary schools and other approved institutions. This assistance is available subject to a means test and certain conditions of eligibility. Assistance under the scheme may include living allowance, incidentals allowance, allowance for a dependent spouse and/or child, and fares allowance. An applicant must be eligible for living allowance in order to receive any of the other benefits and the provision of living allowance is subject to a means test. The maximum rates of living allowance are the same as the Tertiary Education Assistance Scheme.

#### Students Receiving Commonwealth Government Student Assistance South Australia, At 30 June

Scheme	1978	1979
Assistance for Isolated Children .....	696	623
Secondary Allowances .....	2 321	2 537
Aboriginal Secondary Grants .....	915	1 004
Tertiary Education Assistance .....	8 397	8 446
Commonwealth Teaching Service Scholarships(a) .....	43	19
Pre-School Teacher Education(a) .....	152	7
Postgraduate Awards .....	250	205
Aboriginal Study Grants .....	148	253
Adult Secondary Education Assistance .....	338	286

(a) No new awards are being offered under these schemes.

### TERTIARY EDUCATION

The Tertiary Education Authority of South Australia was established on 1 July 1979 under the Tertiary Education Authority Act, 1979 to promote, develop and co-ordinate tertiary education in South Australia. The Authority replaced the former South Australian Board of Advanced Education which since 1972 had functioned as a co-ordinating body for the advanced education sector only.

The Authority is responsible for the co-ordinated development of the three sectors of tertiary education—universities, colleges of advanced education and further education. The Authority is also the State accrediting authority for advanced education and further education awards; it provides advice on the allocation of capital and recurrent funds to post-secondary institutions and is responsible for the overall planning of the State's provision for tertiary education.

The Authority is empowered to consult and negotiate with national authorities concerned with tertiary education, including the Tertiary Education Commission and the Australian Council on Awards in Advanced Education.

### THE UNIVERSITY OF ADELAIDE

The University of Adelaide was established in 1874 by Act of Parliament passed by the South Australian Parliament. The academic work of the University began in March 1876, with four professors, three part-time lecturers, a registrar-librarian, and eight matriculated and fifty-two non-graduating students attending classes in arts and science subjects. Within a decade, law, music and medicine were added; in 1888 studies in engineering were instituted in collaboration with the South Australian School of Mines and Industries; and at the turn of the century the University broke new ground for

Australian universities by founding a conservatorium of music and by instituting studies in commercial subjects. Between the two Wars the Waite Agricultural Research Institute and faculties of dentistry and economics were established; studies in agricultural science and engineering greatly developed; and diploma courses in pharmacy, public administration and physical education instituted.

The original full-time academic staff of four in 1876 had grown by May 1979 to 69 professors, 98 readers, 280 senior lecturers, 93 lecturers, and 114 tutors and demonstrators. Teaching by part-time staff amounted to 60 000 hours in 1979. Part-time staff were mainly engaged in large first-year science classes involving laboratory work and in the faculties of engineering, law, medicine and dentistry.

The governing body of the University of Adelaide is the Council, comprising the Chancellor and the Vice-Chancellor (*ex officio*), twenty-four members elected by a Convocation of Electors, four members elected by the undergraduates and five members appointed by Parliament. The principal advisory committees of the Council are the Education Committee and the Finance Committee each of which is appointed by the Council. There is also the usual university structure of faculties, boards of studies and special committees to advise on particular aspects of the University's work.

In 1979 the University had 11 faculties: arts (11 departments); economics (2); science (11); agricultural science (7); engineering (4); medicine (8); law; mathematical sciences (5); music; dentistry (4); and architecture and planning. Higher degrees are provided in all faculties and post-graduate diploma courses are provided in applied psychology, psychotherapy, environmental studies, computing science, and education.

The University of Adelaide, Enrolments<sup>(a)</sup>

Course	1975	1976	1977	1978	1979
Higher degree candidates(b) .....	1 170	1 243	1 218	1 164	1 140
Undergraduate, diploma, certificate and miscellaneous students:					
Agricultural Science .....	217	224	199	208	204
Applied Science .....	3	—	—	—	—
Architecture .....	179	176	188	189	188
Arts .....	2 904	2 891	2 692	2 415	2 260
Dentistry .....	292	313	309	287	289
Economics .....	709	752	770	761	810
Engineering .....	620	617	621	616	599
Law .....	610	609	639	642	658
Mathematical sciences .....	326	414	418	457	485
Medicine .....	745	810	781	741	732
Music .....	170	162	138	148	172
Science .....	1 255	1 109	1 082	1 004	999
Technology .....	14	2	—	—	—
Miscellaneous (SAIT)(c) .....	115	123	141	160	152
Elder Conservatorium(d) .....	224	210	210	192	202
Visiting students(e) .....	73	150	149	192	206
Total .....	9 626	9 805	9 555	9 176	9 096

(a) Each student is counted once only; in the category appropriate to his principal course.

(b) Includes Master's qualifying candidates.

(c) Students enrolled in subjects as part of a diploma course at the South Australian Institute of Technology.

(d) Students not also enrolled for degree or diploma subjects.

(e) Students enrolled at another university, who may subsequently qualify for a degree of that other university, but who are undertaking part of their degree work at the University of Adelaide.

Intending students are normally required to have passed the Matriculation Examination at a prescribed overall standard. Interstate and overseas students, however, may be accepted on alternative qualifications.

The period of study ranges from three years for certain degree and diploma courses to six years for medicine. As from 1974 all tuition fees and associated charges for degree and diploma courses were abolished. However, fees are still payable in respect of courses in the Continuing Education Department and for studies in the Elder Conservatorium of Music which do not form part of a degree course. All students are still required to pay a Union Fee comprising, for full-time students, an entrance fee of \$20 and an annual fee of \$127; the annual fee for part-time students is proportionately less.

In terms of student enrolments, the University reached its maximum size (almost 10 000 students) in 1976 and since then there has been a steady decrease in enrolments.

From its inception until the end of 1979 the University had conferred 32 879 degrees and 9 279 diplomas by examination. There were 1 683 degrees conferred and 241 diplomas awarded in 1979.

Details of student enrolments are given in the following table.

**The University of Adelaide: Enrolments, 1979<sup>(a)</sup>**

Course	New Students (b)	All Students				
		Full- time	Part- time	External	Staff	Total
Higher degree candidates	238	510	400	123	105	1 138
Master's qualifying candidates .....	1	—	2	—	—	2
Undergraduate, diploma and miscellaneous students:						
Agricultural Science ..	66	166	37	—	1	204
Architecture .....	45	174	14	—	—	188
Arts .....	828	1 322	917	21	—	2 260
Dentistry .....	57	263	26	—	—	289
Economics .....	218	385	423	1	1	810
Engineering .....	192	537	62	—	—	599
Law .....	182	579	79	—	—	658
Mathematical sciences	185	360	123	—	2	485
Medicine .....	128	709	23	—	—	732
Music .....	57	154	18	—	—	172
Science .....	373	792	204	1	2	999
Misc. (SAIT) (c) .....	77	—	152	—	—	152
Elder Conservatorium (d) .....	70	—	202	—	—	202
Visiting students (e)	141	4	187	12	3	206
Total .....	2 858	5 955	2 869	158	114	9 096

(a) Each student is counted once only; in the category appropriate to his principal course.

(b) Figures for undergraduate courses include students who have transferred from another undergraduate course either in this or another university, or who are commencing a second course.

(c) Students enrolled in subjects as part of a diploma course at the South Australian Institute of Technology.

(d) Students not also enrolled for degree or diploma subjects.

(e) Students enrolled at another university, who may subsequently qualify for a degree of that other university, but who are undertaking part of their degree work at the University of Adelaide.

### Waite Agricultural Research Institute

The Waite Institute was established as a research institute at Urrbrae in 1924, through the generous benefaction of Mr Peter Waite. Upon his death in 1922 Peter Waite endowed the University with the properties of Urrbrae, Claremont and Netherby (about 120 hectares) together with Urrbrae House and ancillary buildings and also a Trust Fund of \$120 000. A further 40 hectares has been added by purchase to the original gift, bringing the total to about 160 hectares at the Waite campus. The Institute also has the Mortlock Experiment Station of 275 hectares near Mintaro, which was established in 1965 through the generosity of the late Mrs J. J. Mortlock, and the Charlick Experiment Station of 112 hectares near Strathalbyn, the purchase of which was made possible by a bequest from the late Mr Claude S. Charlick.

Under the provisions of the Agricultural Education Act of 1927 the functions of a teaching faculty of agricultural science were added to the Institute's research functions. The Institute at present has about 100 undergraduate and 90 postgraduate students. The latter undertake either Master's or Doctor of Philosophy studies, and about one third of their number is from overseas. In recent years, postgraduate students have been drawn from more than thirty countries.

There are seven departments at the Waite Institute, spanning the spectrum of the agricultural sciences. They are agricultural biochemistry, agronomy, animal physiology, entomology, plant pathology, plant physiology and soil science. There is also a biometry section. The Institute has a distinguished research record and a world-wide reputation. Some of its more notable achievements have been in the field of soil trace element deficiencies, specifically of manganese, copper and molybdenum, which led to the development of 52 000 square kilometres of previously unproductive country on the Yorke Peninsula, Ninety Mile Desert and the south west of Western Australia. The work on manganese was the fore-runner of trace element work throughout the world. More recently, a method of controlling the cancerous disease of stone fruits, crown gall, by biological means has been developed. This is expected to result in the elimination of losses which at present amount to about \$150 million throughout the world. The barley variety 'Clipper' which was released by the Institute several years ago is the most widely grown variety in Australia and is grown in several other countries. It is estimated to have added \$40 million per annum to the value of Australia's barley crops.

Amongst the many research programs currently being undertaken at the Institute are breeding programs for wheat, barley and triticale, investigations of mechanisms of drought tolerance in cereals, soil chemistry, biological control of insects, pasture management, beef cattle metabolism, investigations into plant viruses and many other projects of vital importance to agriculture in Australia and overseas.

In addition to the Waite Agricultural Research Institute, the CSIRO Divisions of Soils, Horticulture, and Mathematics and Statistics and also the Australian Wine Research Institute are located on the Waite Institute campus, making it one of the most important centres of research in Australia.

### The Library

The central library of the University is named the Barr Smith Library in honour of its original benefactor, Robert Barr Smith, and his son, Tom Elder Barr Smith. During his life Robert Barr Smith provided funds for the purchase of books and members of his family gave the University a substantial donation in 1920 in his memory. Tom Elder Barr Smith provided the first part of the present building in 1930 at a cost of nearly \$70 000.

The central library includes the medical library. In addition there are branch libraries for law, music and the Waite Agricultural Research Institute. Borrowing facilities are available to staff, students and graduates.

Holdings at the end of 1978 were as follows: central library 793 414 volumes; law library 58 512; medical library 88 089; music library 2 603 bound volumes of scores and 14 457 pieces of music in sheets; and the Waite Agricultural Research Institute Library 34 582 volumes, making total holdings equivalent to 991 657 volumes, including the equivalent of 84 435 volumes held in microform.

During 1978 the Library issued 255 943 extramural loans to students, staff and graduates; 29 716 to other libraries in South Australia; and 5 992 to libraries in other States and countries. It received 4 005 loans from other libraries. Accessions totalled 52 802 volumes, including the equivalent of 11 792 volumes in microform, while withdrawals numbered 4 665 volumes. Serial titles regularly received numbered 19 847. Expenditure on staff, books, serials and binding and for other library purposes amounted to \$2 666 000 or 5.8 per cent of total university revenue expenditure.

#### **Elder Conservatorium of Music**

Adelaide was the first University in Australia to establish a Chair of Music (1884) and a Conservatorium of Music (1897). In addition to full degree courses in practical studies, musicology and composition, the University School of Music provides instruction in the various branches of musical performance for part-time students.

Concert experience for students is provided through regular informal concerts internal to the Conservatorium and by occasional public concerts. The University Music Society, each year, arranges a series of night concerts, by members of the staff, who also provide a series of Sunday afternoon public concerts and recitals during the winter months.

In 1979 there were 172 students proceeding to the degree of Bachelor of Music and 202 students taking single subject practical studies.

#### **Residential Colleges**

The residential colleges are independent bodies affiliated with the University. Three of the four colleges for undergraduates were founded by churches but impose no denominational restrictions on admission; the fourth undergraduate college and the college for postgraduate students have no denominational affiliation. All are situated in North Adelaide within easy walking distance of the University.

Their names, church affiliations, years of founding and residential capacities are:

St Mark's .....	Church of England .....	1925	130 students, 12 tutors;
St Ann's .....	Non-denominational .....	1947	121 students, 8 tutors;
Aquinas .....	Catholic .....	1948	102 students, 12 tutors;
Lincoln .....	Uniting Church .....	1952	176 students, 15 tutors;
Kathleen Lumley ...	Non-denominational (postgraduate) .....	1968	70 students.

St Mark's confines its membership to men; in 1973 St Ann's and Lincoln and in 1974 Aquinas made their facilities available to both men and women. Kathleen Lumley has been co-residential since its foundation.

#### **Other Special Features**

Unusual features of the University's work include its extensive research into the linguistics, myths, legends and musicology of the Aboriginals; teaching and research in

Computing Science ranging from first year undergraduate level to the Doctorate of Philosophy; the Mawson Institute for Antarctic Research (which also takes postgraduate students); upper atmosphere research by balloon and rocket; mineral exploration; arid zone studies; and adult education by the University's Department of Continuing Education.

### Finance

Details of income and expenditure for the period 1975 to 1978 are shown in the following table.

The University of Adelaide, Finance<sup>(a)</sup>

Particulars	1975	1976	1977	1978
\$'000				
Income for capital purposes:				
Commonwealth Government .....	2 447	1 776	3 917	5 982
Income for other purposes:				
Commonwealth Government .....	30 286	35 157	38 753	41 071
State Government .....	111	214	288	382
Student fees .....	126	128	143	138
Other .....	2 153	1 915	3 094	2 817
Total income .....	35 123	39 190	46 195	50 390
Expenditure:				
Teaching and research .....	25 617	28 396	32 171	33 997
Administration .....	2 168	2 530	2 711	2 995
Libraries .....	2 113	2 417	2 666	3 027
Buildings, premises, grounds .....	3 481	3 273	6 455	7 120
Other .....	1 768	1 949	2 084	1 969
Total expenditure .....	35 147	38 565	46 087	49 108

(a) Includes Waite Agricultural Research Institute.

### THE FLINDERS UNIVERSITY OF SOUTH AUSTRALIA

During 1958 when the University of Adelaide began to plan two major new buildings on its existing 13 hectare site it became apparent that further expansion would have to take place elsewhere.

Early in 1961 the South Australian Government indicated that it would make available to the University of Adelaide an area at Bedford Park, of some 150 hectares, situated about eleven kilometres from the centre of Adelaide in the foothills of the Mount Lofty Ranges. Consequently the University of Adelaide made a submission for financial support to the Australian Universities Commission in 1962, which gave approval for the planning of Bedford Park. The institution became known as 'The University of Adelaide at Bedford Park'. Towards the end of 1965 the South Australian Government decided to make the University of Adelaide at Bedford Park a fully autonomous university under the name 'The Flinders University of South Australia', after the great explorer and hydrographer, Matthew Flinders. A more detailed history of the Flinders University was included on pages 163-8 of the *South Australian Year Book* 1967.

The Flinders University of South Australia Act came into force on 1 July 1966. The Act places the whole management of the University in the hands of a council with powers to make statutes and regulations subject to the approval of Convocation which

comprises the graduates of the University, graduates of other universities who have been awarded a diploma of the University, and full-time members of the staff.

The Council comprises thirty-one members: the Chancellor; the Vice-Chancellor; the President of the Students Association; five members of the Parliament of South Australia; three members appointed by the Governor; eight members of the academic staff elected by the academic staff; one member of the ancillary staff elected by the ancillary staff; four persons elected by Convocation; one postgraduate student elected by the postgraduate students; three undergraduate students elected by the undergraduate students; and not more than three other members co-opted by the Council.

### **Academic Organisation**

The academic organisation of the University is based on 'Schools' instead of faculties or departments. The School is the basic academic and administrative unit and one of the academic staff of each school is appointed to act as the Chairman of the School for a period of three years.

#### **The Flinders University of South Australia Full-time Staff Establishment, 1 January 1979**

Schools:		
Academic (teaching and research) .....		316
Technical .....		150
Clerical .....		82
Library:		
Professional .....		23
Other .....		44
Registry:		
Senior administrative .....		29
Clerical .....		61
Caretaking, grounds and maintenance .....		61
Academic services:		
Professional .....		6
Other .....		5
Student services:		
Professional .....		7
Other .....		9
Total .....		<hr/> 793

At present there are eight Schools: Humanities; Social Sciences; Mathematical Sciences; Physical Sciences; Biological Sciences; Medicine; Earth Sciences; and Education. The School of Biological Sciences is an integrated one; there are no divisions into the traditional disciplines of botany, zoology, micro-biology, etc., the emphasis being on the manner in which the teaching and research are organised, *e.g.* cellular biology, molecular biology. The remaining schools have a total of twenty-six disciplines established within them.

Details of enrolments are shown in the following two tables.

**The Flinders University of South Australia: Enrolments, 1979**

Course	Commencing Students	All Students		
		Full-time	Part-time	Total
Arts .....	558	1 032	651	1 683
Sciences .....	171	357	83	440
Economics .....	136	226	103	329
Education .....	21	42	34	76
Physical Education .....	22	104	9	113
Social Work .....	14	1	13	14
Medicine .....	77	341	—	341
Higher degrees .....	106	160	244	404
Master qualifying .....	12	2	12	14
Postgraduate diploma .....	160	113	132	245
Postgraduate bachelor .....	57	92	28	120
Miscellaneous .....	118	5	162	167
Total .....	1 452	2 475	1 471	3 946

**The Flinders University of South Australia, Enrolments**

Course	1976	1977	1978	1979
Undergraduate bachelor degrees:				
Arts .....	1 848	1 795	1 708	1 683
Science .....	480	441	444	440
Economics .....	303	331	297	329
Education .....	131	119	103	76
Physical Education .....	68	103	107	113
Medicine .....	185	231	287	341
Social Work .....	—	—	—	14
Postgraduate bachelor and diploma:				
Bachelor Social Administration .....	115	107	101	86
Bachelor Special Education .....	45	61	47	34
Diploma Education .....	177	152	94	60
Diploma Education (Primary) .....	12	28	29	15
Diploma Education Administration (a) .....	5	8	2	—
Diploma Social Sciences .....	39	66	{ 25	33
Diploma Applied Psychology .....			{ 36	41
Diploma Nutrition and Dietetics (a) .....	10	14	12	12
Diploma Accounting (b) .....	—	—	46	74
Diploma Urban and Social Planning (c) .....	—	—	—	10
Higher degrees (including master qualifying) ...	366	404	429	418
Miscellaneous .....	114	185	153	167
Total .....	3 898	4 045	3 920	3 946

(a) Commenced in 1976.

(b) Commenced in 1978.

(c) Commenced in 1979.

### The Library

The acquisition of books for the Library commenced in 1963 when the first Library staff was appointed. By the time teaching began in 1966 a collection of some 60 000 volumes had been assembled. At the end of 1979 the collection totalled 440 000 volumes and approximately 25 000 volumes are being added each year; 7 400 periodicals are currently received. Emphasis is placed on the acquisition of material to support the current teaching and research programs of the University. Loans to staff and students during 1979 totalled 120 000. The Medical Library, situated in the Flinders Medical Centre, is a branch of the main Library and holds about 22 000 volumes on medicine and allied subjects for University and Medical Centre users.

### Admission to the University

Normally students must have qualified for matriculation by passing the Matriculation Examination of the Public Examinations Board in a prescribed manner, and must be selected by the University. Flinders University, together with the other seven tertiary institutions in South Australia, have established the South Australian Tertiary Admissions Centre to which all students wishing to enrol in any of the institutions must apply for admission. Admission is subject to selection within the quota and is based on academic merit.

### Degrees Offered

The University offers the following degrees; Bachelor of Arts, Bachelor of Economics, Bachelor of Education, Bachelor of Medicine and Bachelor of Surgery, Bachelor of Education (Physical Education), Bachelor of Science, Bachelor of Social Work, Bachelor of Social Administration, Bachelor of Special Education, Bachelor of Theology, Master of Arts, Master of Arts (Drama), Master of Economics, Master of Education, Master of Educational Administration, Master of Psychology, Master of Social Administration, Master of Science, Doctor of Philosophy, Doctor of Letters and Doctor of Science. In addition there are postgraduate diplomas in Accounting, Applied Psychology, Social Sciences, Education (Primary and Secondary), Nutrition and Dietetics, and Urban and Social Planning.

### The Flinders Institute for Atmospheric and Marine Sciences

The Flinders Institute for Atmospheric and Marine Sciences was established by the Council to further the University's interest in physical and environmental aspects of the air and the sea.

Academic staff and postgraduate students of the University who seek to conduct their research within the framework of the Institute's operations may be considered as members. As an association of scientists with related research interests, the Institute is able to undertake a relatively wide range of investigations, the locations of which range from the Antarctica to Lake Eyre.

The Institute ensures that the University's academic and technological capabilities in atmospheric and marine sciences are made known to such government instrumentalities and private sectors of industry as may make use of them to the mutual benefit of both the outside group and the University. As such, in many areas of the environmental and earth sciences, the Institute is able to play an active role in introducing senior undergraduate students and postgraduate research scholars to some of the scientific needs of the community. Tidal and specialised meteorological data libraries, instrumental facilities and field stations on the Coorong and Cape du Couedic as well as a series of publications are maintained.

In recent years, the work of the Institute has been extensively supported by, or

associated with, the Australian Research Grants Committee, the Commonwealth Department of Environment, Housing and Community Development, the Bureau of Meteorology, the Antarctic Division of the Department of Science, Department of Defence, the South Australian Housing Trust, the Engineering and Water Supply Department, the US National Centre for Atmospheric Research, the US National Science Foundation, the Swissteco (Radiation Instruments), the Horace Lamb Institute of Oceanography, Iceberg Transport International Ltd and the University's own research budget.

#### **Flinders University Institute for Energy Studies**

The Institute for Energy Studies at Flinders University has a membership extending through the disciplines of biology, chemistry, physics, geography, mathematics and meteorology. The aim of the Institute is to explore alternative methods of energy production which are non-polluting. The projects under investigation are concerned with collection, storage and conversion of various forms of solar energy, and aspects of fusion physics. The Institute publishes reports on significant developments by its research associates.

#### **National Institute of Labour Studies**

The National Institute of Labour Studies in the School of Social Sciences encourages graduate study, research and publication in the areas of industrial relations, labour economics, industrial psychology and sociology, and labour history. It publishes a quarterly review of labour events, *The Australian Bulletin of Labour*, and a working paper series. Current research projects include studies of worker participation in industry, interaction between work and social activity, unemployment and wage relativity problems.

The Institute is administered by a management committee comprising a director, research associates and persons outside the University. The Research associates include members of staff of the School of Social Sciences who are active in labour studies and members of staff of some other tertiary institutions in Australia.

#### **The Centre for Research in the New Literatures in English (CRNLE)**

In April 1977, Flinders University established, within the School of Humanities, the Centre for Research in the New Literatures in English (CRNLE).

The primary aim of the CRNLE is promotion of research in its field by providing a specialist library collection; developing and supervising postgraduate research programs; facilitating more effective teaching of undergraduate courses; and sponsoring research investigations that involve cultural and social questions and are based on cross-cultural, comparative and inter-disciplinary approaches to the study of the literatures and societies concerned.

Membership of CRNLE is open to academic staff, research assistants, graduate students, visiting scholars who are working in conjunction with the Centre, writers and other qualified persons.

#### **The Centre for Applied Social and Survey Research (CASSR)**

The Centre for Applied Social and Survey Research (CASSR) was established by the University Council in 1977 to promote applied social and survey research, disseminate the findings of research through the publication of technical research papers and monographs and the holding of seminars, workshops and summer schools.

In addition to conducting its own research activities and providing a survey research facility for staff and students within the University, CASSR can provide consulting advice to government and private enterprise in a wide range of applied social research fields and conduct sample survey research and data analysis in accordance with the University's outside research contract policy.

CASSR's activities are controlled by a management committee which comprises a director, academic staff of the University, and a number of experts in social research from outside organisations.

#### **Institute for Atomic Studies**

The Institute for Atomic Studies was formed in 1976 to act as a focus for the interaction of scientists and graduate students and for the dissemination of reports of research involving the structure and interaction of microscopic quantum systems. Present members, within the disciplines of physics and chemistry, are pursuing fundamental research in the fields of experimental and theoretical atomic collision physics, low and intermediate energy nuclear theory, quantum field theory, statistical physics, electron transport phenomena and quantum and surface chemistry.

#### **Institute for Australasian Geodynamics**

In June 1976, the Council of the University approved the formation of the Institute for Australasian Geodynamics. The Institute grew out of the research work undertaken by the geology and geophysics staff members of the School of Earth Sciences since 1972 in various aspects of geodynamics.

The Institute was formed to provide a focus for geodynamic research within the School of Earth Sciences, but has the broader aim of:

- (a) fostering co-operative studies between Australian and Asian scientists on the geodynamic evolution of Australasia;
- (b) facilitating the training of Asian and Australian research scholars in geodynamic aspects peculiar to the region;
- (c) encouraging and co-ordinating specific research projects and the publication of reports; and
- (d) setting up and maintaining a data bank of regional geological and geophysical information.

#### **Centre for Neuroscience**

The Centre for Neuroscience was established by the Council of the Flinders University of South Australia to foster the interests in the neurosciences that existed within the Schools of Medicine, Biological Sciences and Social Sciences and in the Flinders Medical Centre.

Membership is open to University academic staff working in the neurosciences. Postgraduate students and research staff are eligible to become associate members and associate status is also granted to academic and scientific staff at other institutions in South Australia. At present the membership comprises 36 members and 34 associates.

#### **University Hall**

University Hall, the University's first hall of residence was completed early in 1971. During the academic year it provides accommodation for nearly 200 students, mostly in single furnished study bedrooms. In addition some double study bedrooms are provided

together with flat accommodation. During University vacations the Hall is also available for accommodation and conferences organised by outside bodies.

#### **Finance**

Details of income and expenditure for the period 1975 to 1978 are shown in the following table.

**The Flinders University of South Australia, Finance**

Particulars	1975	1976	1977	1978
\$'000				
Income for capital purposes:				
Commonwealth Government .....	3 086	1 153	2 601	183
Income for other purposes:				
Commonwealth Government .....	13 882	15 943	18 113	19 651
State Government .....	104	84	249	220
Other .....	466	832	784	943
Total income .....	17 538	18 012	21 747	20 997
 Expenditure:				
Teaching and research .....	9 409	11 603	13 193	14 703
Administration .....	1 867	2 065	2 344	2 485
Libraries .....	1 213	1 200	1 447	1 496
Buildings, premises, grounds .....	4 496	1 837	3 674	1 534
Other .....	1 029	640	763	962
Total expenditure .....	18 014	17 345	21 421	21 180

#### **ADVANCED EDUCATION**

There are six colleges of advanced education in South Australia offering courses in a wide range of fields. The colleges are Adelaide College of the Arts and Education, Hartley College of Advanced Education, Roseworthy Agricultural College, Salisbury College of Advanced Education, South Australian Institute of Technology and Sturt College of Advanced Education.

Further details of college activities are listed below.

#### **ADELAIDE COLLEGE OF THE ARTS AND EDUCATION**

Adelaide College of the Arts and Education was formed in January 1979 by the merger of the former Adelaide and Torrens Colleges of Advanced Education. Adelaide Teachers College, the original teacher training institution in South Australia, was opened on 1 June 1876. It was parent to Western Teachers College which combined with the South Australian School of Art in 1973 to form the then Torrens College of Advanced Education. Adelaide Teachers College became Adelaide College of Advanced Education in 1973. The combined College is the oldest institution in Australia with an unbroken history devoted to the training of teachers.

The City Campus is situated in Kintore Avenue, Adelaide, on the site of the former

Adelaide Teachers College which it first occupied in 1927. The activities there are related principally to the training of secondary teachers (in Arts, Science, Drama, School Librarianship, Religious Studies, Physical Education, Commercial Studies or Community Languages). Many postgraduate courses are also offered (in Education, Teaching, Educational Administration, Curriculum Development, Community Languages, Reading Education or Religious Education). An Associate Diploma course in Interpreting/Translating began in 1977.

The Underdale campus is a new modern complex where courses are offered at the undergraduate level in Art, Design, Music, Aboriginal Studies and Education. Post-graduate courses in Art and Music Education, Further Education, Teaching English as a Second Language and Home Economics are offered as well as a degree for qualified and experienced teachers.

Most programs are available to full-time, part-time and external students. The College is the centre in the State for external studies at the advanced education level. The total enrolment was over 5 100 students in 1979.

#### HARTLEY COLLEGE OF ADVANCED EDUCATION

Hartley College of Advanced Education was formed by the amalgamation of Murray Park and Kingston Colleges of Advanced Education.

The college offers undergraduate and postgraduate courses in the fields of primary and early childhood education; undergraduate courses in journalism, communication studies and liberal studies and postgraduate courses in music, program evaluation, parent education and counselling, and specialised teaching areas. In 1979 it operated on a divided campus at Magill and North Adelaide.

#### ROSEWORTHY AGRICULTURAL COLLEGE

Roseworthy Agricultural College is a college of advanced education located fifty kilometres north of Adelaide. Established in 1883, it is the oldest of Australia's agricultural colleges.

The College provides advanced education and training, and conducts research in the theory, management and practice of primary production, in methods of agricultural marketing and in the industrial processes involved in the agricultural processing industries. In addition to normal classroom facilities the 1 200 hectare campus includes a dairy, modern winery, vineyards and orchard. About 500 hectares are cropped annually as part of the educational program for students. Residential accommodation is provided for students.

Livestock units include cattle (Jersey and Poll Shorthorn), sheep (Merino and Poll Dorset), pigs, horses and goats. A major wheat breeding program is conducted and the variety 'Lance' was released in 1978. Several grants from the Australian Research Grants Committee have been received by College officers for research in viticulture, animal nutrition, entomology and for a study of the adoption of the new variety, 'Lance', by wheatgrowers.

The College currently offers the following courses: Bachelor of Applied Science in Oenology, Diploma of Applied Science in Agriculture, Diploma of Applied Science in Natural Resources, Associate Diploma in Wine Marketing, Associate Diploma in Agriculture (including Farm Management, Agricultural Production, Horse Husbandry and Management Options) and Graduate Diplomas in Agriculture, Natural Resources and Wine. The Graduate Diploma in Agriculture-Dry Land Farming Systems was established in 1976, and is financed by the Food and Agricultural Organization of the United Nations and by the Australian Development Assistance Bureau. Students from the Near East and

North Africa have attended the course which presents the principles and practices of ley-farming systems suited to the Mediterranean type climate areas of South Australia.

To be eligible for admission to the undergraduate courses, applicants normally must have completed full secondary schooling. Selection is based on performance in examinations at Year 12 level of secondary education in South Australia, or equivalent, and for some courses on previous relevant practical experience. Provision is made for the admission of mature age students. Applicants for the graduate diploma courses must have completed an appropriate three-year tertiary course of study.

At 30 April 1979 there were 370 students enrolled at the College.

#### SALISBURY COLLEGE OF ADVANCED EDUCATION

The College, which is located on a 28 hectare site approximately 20 kilometres north of Adelaide, was established in 1968 as the Salisbury Teachers College. The College was granted autonomy and renamed Salisbury College of Advanced Education on 1 January 1973.

The College offers the following courses: Diploma of Teaching, a three-year full-time course for junior primary, primary and secondary teachers; Bachelor of Education degree course, a one-year full-time course undertaken on the completion of a Diploma of Teaching; Graduate Diploma in Teaching (two years part-time) in the fields of Popular Culture, Geography in Education, Jazz Education, Social Education, Speech Education and Women's Studies; Graduate Diploma in Curriculum (two years part-time); Graduate Diploma in Educational Technology (two years part-time); Graduate Diploma in Outdoor Education (two years part-time) and the Graduate Diploma in Reading Education (two years part-time). The College also offers a Graduate Diploma in Recreation (two years part-time) and Associate Diploma courses in Recreation and in Parks and Wildlife Management (two years full-time).

#### SOUTH AUSTRALIAN INSTITUTE OF TECHNOLOGY

The South Australian Institute of Technology, which adopted its present name in 1960, was established in 1889 as the South Australian School of Mines and Industries.

After its inception there was co-operation between the University of Adelaide and the School, and in 1903 joint engineering courses were established. An important development in the history of technical education came in 1957 with an agreement between these institutions whereby certain courses of study at the School would lead to the degree of Bachelor of Technology at the University. Other degree courses were subsequently introduced.

Consequent upon government policy aimed at the independent development of colleges of advanced education the last degree students under the joint arrangement with the University of Adelaide graduated in 1976. The South Australian Institute of Technology Act, revised in 1972, empowered the Institute to grant its own degrees. The first of these awards was made at the 1973 graduation ceremony.

The Institute maintains a close relationship with the Education Department and the Department of Further Education, and since 1959 there has been a progressive transfer of control of certain activities. Classes up to and including Matriculation level and all trade classes were transferred to the control of the Education Department, as was the Adelaide Technical High School in September 1963.

A number of technician courses have progressively been transferred from the Institute to the Department of Further Education and this has enabled the Institute to expand its work in the professional and more advanced semi-professional fields. However, some courses, not approved for awards in advanced education by the Australian Commission

on Advanced Education but which lead to a certificate awarded by the South Australian Technician Certificate Board, will continue to be offered.

In addition to its campuses at North Terrace, City, and The Levels (approximately thirteen kilometres north of the city), the Institute operates a campus at Whyalla teaching at both professional and semi-professional level. In 1979 the Institute taught over 1 000 subjects.

The Institute is administered by a Council which has complete authority within the limits of the finance placed at its disposal and for which it is responsible annually to Parliament. The autonomy provided by this feature of control for many years made the Institute unique among Australian technical institutes, but in recent years, the other colleges of advanced education have been granted autonomous government.

A wide range of courses and subjects to various levels is offered. All twenty-three of the professional courses presented by the Institute have been accredited by the Australian Council On Awards In Advanced Education for the award of Institute degrees. The Institute offers in addition to a Masters' degree in Applied Science (Pharmacy), a Masters' degree (Research) which is available in fourteen areas. There are also twenty graduate diploma courses, fourteen of which have already been accredited.

For a number of years the Institute has offered courses which lead by various periods of part-time study to a level of qualification below that of the full professional. These courses provide for those employed in the broad area between the tradesman and the professional. In addition to eight Technician Certificate courses, the Institute also offers twelve Associate Diploma and two Advanced Certificate courses which may be entered after completion of a Technician Certificate or twelve years of schooling. Degree, diploma and certificate courses applicable to local needs are conducted at the Institute's Whyalla campus.

Details of income and expenditure for the period 1975 to 1978 are shown in the following table.

#### South Australian Institute of Technology, Revenue and Expenditure

Particulars	1975	1976	1977	1978
\$'000				
Income for capital purposes:				
Commonwealth Government .....	5 163	1 530	763	1 704
Income for other purposes:				
Commonwealth Government (a) .....	11 477	12 126	14 156	15 257
Other .....	206	166	216	273
Total income .....	16 846	13 822	15 135	17 234
 Expenditure:				
Capital (land, buildings, plant, furniture and equipment) .....	4 844	1 755	898	1 871
Revenue .....	11 327	12 619	14 324	15 399
Total expenditure .....	16 171	14 374	15 222	17 270

(a) Includes amounts transferred to Capital Account for equipment and furnishings purchased: 1975, \$57 000; 1976, Nil; 1977, Nil; 1978, Nil.

The Library is situated at each of the three campuses of the Institute. The total holding at the end of 1979 was 170 000 volumes with some 3 200 periodical titles being received during the year. Loans to staff and students exceeded 120 000 in 1979.

Emphasis is placed on the acquisition of material in the applied sciences, technology and social sciences to support the Institute's teaching program. Collections of audio-visual materials including films, microforms, maps, prints, records and slides are being developed.

The following table shows the details of students and staff for the period 1975 to 1979.

**South Australian Institute of Technology, Students and Staff**

Particulars	1975	1976	1977	1978	1979
<b>Students:</b>					
Individual enrolments .....	5 724	5 682	5 715	6 016	5 944
Subject enrolments .....	20 175	19 875	22 606	24 361	23 808
Full-time teaching staff .....	332	348	335	340	337
Part-time teaching staff .....	625	676	608	568	567

**STURT COLLEGE OF ADVANCED EDUCATION**

Sturt College of Advanced Education was formerly Bedford Park Teachers College established in 1966 at the same time as the Flinders University of South Australia. The College was granted autonomy and renamed on 1 January 1973. The College occupied its present buildings in 1967. The site, of about 9 hectares, is located approximately 11 kilometres south of Adelaide and is adjacent to Flinders University.

At present the College offers programs within the School of Teacher Education and the School of Health Professions. Within the School of Teacher Education, the Diploma of Teaching is offered in the areas of junior primary, primary and secondary teaching. Students successfully completing the fourth year of study, usually all secondary and a selected number of primary student teachers, receive the award of Bachelor of Education. The Bachelor of Education is also undertaken by in-service teachers and nurse educators who have previously completed the Diploma of Teaching or its equivalents. From 1977, a one-year full-time equivalent Graduate Diploma course in Community and School Relations has been offered. From 1979 a one-year full-time equivalent Graduate Diploma in Social Education has been offered, and from 1980 one-year full-time equivalent Graduate Diploma courses are offered in Health Education, Teaching English as a Second Language and in Teaching.

From 1975 the School of Health Professions has offered three-year full-time courses in nursing and speech pathology and, from 1977, a one-year full-time diploma course in community health nursing and two-year diploma courses in radiography and nurse education are being offered. A bridging course is available for hospital-trained nurses who wish to study for the Diploma of Applied Science (Nursing) award. Most of the programs offered in the School of Health Professions utilise the facilities, and to a lesser extent, the staff of the Flinders Medical Centre which is situated a few hundred metres from the College.

The following table shows for all Colleges of Advanced Education in South Australia, the number of students in various course levels and fields of study for the period 1977 to 1979.

**Colleges of Advanced Education, Students by Course Level and Field of Study  
South Australia**

Course	1977	1978	1979
<b>Master Degree:</b>			
Applied Science .....	3	8	13
Building, Surveying and Architecture .....	—	1	1
Engineering and Technology .....	2	5	7
Paramedical .....	13	13	27
Total .....	18	27	48
<b>Graduate Diploma:</b>			
Agriculture .....	18	14	11
Applied Science .....	62	97	84
Building, Surveying and Architecture .....	55	47	72
Commerce and Business .....	280	377	325
Engineering and Technology .....	2	17	14
Liberal Studies .....	114	188	215
Music .....	22	17	17
Paramedical .....	17	17	20
Teacher Education .....	737	621	743
Total .....	1 307	1 395	1 501
<b>Bachelor Degree:</b>			
Agriculture .....	—	61	70
Applied Science .....	348	345	357
Art and Design .....	56	193	269
Building, Surveying and Architecture .....	330	309	289
Commerce and Business .....	1 040	1 089	1 049
Engineering and Technology .....	635	586	614
Liberal Studies .....	531	585	575
Music .....	26	43	59
Paramedical .....	521	559	609
Teacher Education .....	653	1 737	2 430
Total .....	4 140	5 507	6 321
<b>Diploma:</b>			
Agriculture .....	212	172	119
Applied Science .....	—	—	64
Art and Design .....	281	166	118
Liberal Studies .....	66	66	63
Paramedical .....	322	354	361
Teacher Education .....	7 193	6 286	5 213
Total .....	8 074	7 044	5 938
<b>Associate Diploma:</b>			
Agriculture .....	37	63	94
Applied Science .....	32	51	79
Art and Design .....	162	189	189
Building, Surveying and Architecture .....	184	189	188
Commerce and Business Studies .....	419	450	439
Engineering and Technology .....	135	207	236
Liberal Studies .....	441	613	730

**Colleges of Advanced Education, Students by Course Level and Field of Study  
South Australia (*continued*)**

Course	1977	1978	1979
<b>Associate Diploma: (<i>continued</i>)</b>			
Paramedical .....	219	219	185
Teacher Education .....	—	42	94
Total .....	1 629	2 023	2 234
<b>Total:</b>			
Agriculture .....	267	310	294
Applied Science .....	445	505	597
Art and Design .....	499	548	576
Building, Surveying and Architecture .....	569	546	550
Commerce and Business Studies .....	1 739	1 916	1 813
Engineering and Technology .....	774	815	871
Liberal Studies .....	1 152	1 448	1 583
Music .....	48	60	76
Paramedical .....	1 092	1 162	1 202
Teacher Education .....	8 583	8 686	8 480
Total .....	15 168	15 996	16 042

### FURTHER EDUCATION

The Department of Further Education, established in 1971, is responsible for a wide range of post-secondary educational activities conducted by community colleges and colleges of further education in all areas of the State.

Much of the educational development is directed towards an improvement in vocational competence. This includes the provision of courses for the employment sectors of industry, commerce and government. These courses are provided at many levels from basic trade (apprentice) to post-trade certificate and diploma level. Also associated with this vocational orientation are preparatory or general education courses.

The Department also caters for continuing education for people of all ages by providing a wide variety of general, academic, craft, art, cultural and general interest courses. The Department gives more than 1 800 educational programs involving about 2 000 subjects for over 120 000 students throughout South Australia.

The following table shows the numbers of staff employed in community and further education colleges.

**Further Education: Staffing, South Australia**

Staff	1976	1977	1978
Full-time teaching .....	1 115	1 274	1 301
Part-time teaching( <i>a</i> ) .....	3 320	3 627	4 282
Non-teaching (ancillary) .....	578	678	721
Total .....	5 013	5 579	6 304

(a) The large number of part-time teachers in each year reflects the Department's policy to have teaching staff who are currently involved in activities in commerce, industry and government, and to provide courses for groups, particularly in country centres, where full-time staff are not warranted.

The following table shows the range of educational activities conducted by the Department of Further Education during 1977 and 1978, and student hours involved.

**Further Education: Distribution of Educational Activities, South Australia**

Courses	Student Hours			
	1977		1978	
	No.	Percentage of Total	No.	Percentage of Total
Degree and diploma .....	104 902	0.8	24 128	0.2
Technician, certificate and post-trade .....	3 829 298	28.1	3 006 326	27.7
Basic trade or apprenticeship .....	2 650 378	19.5	2 522 389	23.3
Other skilled trade and vocational .....	1 759 533	12.9	983 291	9.1
Preparatory or general education .....	2 578 005	19.0	2 426 631	22.4
General interest, enrichment and improvement .....	2 681 628	19.7	1 881 178	17.3
Total .....	13 603 744	100.0	10 843 943	100.0

The following table shows the number of subjects and course enrolments for the years 1976 to 1978.

**Further Education: Enrolments, South Australia**

Course	1976	1977	1978
SUBJECT ENROLMENTS			
Degree and diploma .....	3 766	2 727	685
Technician, certificate and post-trade .....	44 711	55 543	52 298
Basic trade or apprenticeship .....	24 487	25 359	23 723
All other skilled trade and vocational .....	27 634	29 448	27 862
Preparatory and general education .....	21 467	30 689	31 147
General interest, enrichment and improvement .....	47 529	51 145	50 232
Total .....	169 594	194 911	185 947
COURSE ENROLMENTS			
Degree and diploma .....	2 374	2 557	538
Technician, certificate and post-trade .....	25 196	30 153	27 899
Basic trade or apprenticeship .....	9 651	10 065	9 730
All other skilled trade and vocational .....	25 302	25 409	25 343
Preparatory and general education .....	16 466	24 542	25 815
General interest, enrichment and improvement .....	45 316	46 925	48 512
Total .....	124 305	139 651	137 837

**Teaching Methods**

The Department has continued in its efforts to improve public accessibility to courses by providing for the option of full-time, part-time or correspondence studies in a large number of courses. Special arrangements for country apprentices have continued to operate with success. Correspondence students have also been able to attend community and further education colleges for supervised study.

The integrated training approach to vocational education continues to develop in many colleges. The more traditional divisions of technical courses into theory, drawing and practical plus on the job experience, have been broken down. Integration of course work on a project basis has resulted in a more meaningful learning experience for the students.

During 1978 there was a continuing involvement by teachers in the production and utilisation of different kinds of multi-media materials. Many colleges now produce and use a wide range of learning materials to meet this need. These materials which include slide and overhead transparencies, video tapes, and audio tapes as well as multi-media packages have become increasingly available for internal and external students.

The Educational Multi-Media unit of the Open College of Further Education, provides a State-wide service in the production of learning materials and their usage. Part of this service has been to produce a number of video programs for general distribution and educational television service for a number of teachers.

During 1978 there has been a continuing expansion in the facilities of college library/resource centres. Total holdings of books, periodicals, sound and video tapes, slides and transparencies now exceed 200 000 items. The appointment of lecturers (resource centre) to many colleges has been a major factor in developing the concept of the resource centre as an important part in the learning process.

### **Administration**

Community colleges and colleges of further education function along autonomous lines. This autonomy encompasses enrolments, some staffing and budgeting within determined allocations.

The Operations Division is responsible for translating established policies into operational programs particularly in the areas of curriculum, staff training and development. The Resources Division services all areas of the Department with emphasis upon research, building, educational resources, administration, finance and clerical services.

### **Current and Future Developments**

The major areas of change and emphasis include the following inter-related developments:

- the continuing development of the community college, both conceptually and physically;
- the further development of general studies in colleges which were predominantly technical by tradition, with the emphasis on preparatory, remedial and bridging courses;
- the adoption of the 'open college' approach to education so as to reach a broader sample of the South Australian population at the post-secondary level;
- greater use of media in the teaching-learning situation in conjunction with the planned development of library/resource centres;
- co-operation and co-ordination in curriculum matters with other post-secondary institutions, and increased community involvement in educational planning.

### **Block Release Training**

A new form of technical education known as Block Release Training was introduced in 1973 for country apprentices in some trades in which apprentices previously were required to study by correspondence. It involves first and second year apprentices, who live outside a technical school district, attending a metropolitan college for a total period

of eight weeks each year. In some cases it is four blocks of two weeks and in other cases two blocks of four weeks. These apprentices receive the same training as those employed in the metropolitan area and in country school districts and are not required to undertake any correspondence course training. The Apprenticeship Commission arranges accommodation in the government hostel at Pennington, or private accommodation may be arranged, with a subsidy being payable in both cases.

#### **Workers Educational Association of South Australia**

The Workers Educational Association of South Australia Incorporated (WEA) was established in 1913. Originally patterned on the English WEA, it is a voluntary adult education organisation which works in close co-operation with other adult education organisations, and the trade union movement.

Activities it organises include a comprehensive day and evening class program, postal courses for trade unionists throughout Australia, and provides pre-retirement, trade union, credit union and industrial democracy training in South Australia. It possesses an adult education centre in the City. Courses are offered at the University of Adelaide, the Flinders University of South Australia, the Institute of Technology, many colleges of advanced education, high schools and other public institutions.

In 1979 there were 835 classes with a total enrolment of 20 500 students organised by the WEA and a further 16 postal courses with an enrolment of 1 800. Since 1973 a program of trade union education has been developed with the aid of a State Government grant. Courses have been provided on worker participation concepts and skills for union officials and for employees of several government departments. The WEA's union education office also provides training and education programs for the credit union movement in South Australia. During 1979, the union education office conducted courses for some 700 students in the three fields of trade unionism, worker participation and credit unions.

#### **Pre-Retirement Association of South Australia**

The Pre-Retirement Association of South Australia Incorporated (PRA) was established in 1978 as a voluntary organisation to meet the needs of people who are about to retire or who have recently retired. It offers courses for industry, commerce and organisations in pre-retirement education; it also assists in promoting courses for the general public and a range of seminars while stimulating research and publication. It works closely with the WEA of South Australia and other interested educational and service organisations.

#### **University of Adelaide: Department of Continuing Education**

The University initiated adult education classes in 1917 under a Department of Tutorial Classes. A Department of Adult Education was established in 1957 and was renamed the Department of Continuing Education in 1977.

The Department provides courses and schools in a range of subjects for members of the general public and arranges seminars on issues of social and political concern. It has a publications program based on proceedings of the schools and seminars including *Alitji In The Dreamtime*, the Pitjantjatjara version of *Alice In Wonderland*, and *Five Creeks of the River Torrens*, one of the many studies in social and natural history. The Department also arranges courses for the continuing education of professional people.

In June 1972 the University opened an educational radio station, on 1 630 Hz, under the call sign VL5UV. Established by private donation of \$100 000 the station is administered by the Department of Continuing Education and costs are met by the University

and by listeners' donations and subscriptions. Since its opening the station has provided structured courses for professional people and the general public.

Since 1975 the station has operated on the MW band under a new experimental broadcasting licence with the call sign 5UV. Under the new arrangements hours of broadcasting were doubled to approximately 100 hours per week and its range of programs included music for the first time. In addition it offered access programs for student and community groups and approximately 28 ethnic communities broadcast regularly. In October 1978 the University was offered and accepted a full AM licence by the newly established Australian Broadcasting Tribunal.

Total enrolments for all departmental activities during 1979 exceeded 5 300 and an estimated weekly audience of 45 000 listened to 5UV programs.

#### TRADE EDUCATION

Legislation governing apprenticeships in South Australia is contained in the Apprentices Act, 1950-1978 which is administered by an Apprenticeship Commission consisting of a full-time chairman and five part-time members representing employer organisations, trade unions and the Minister of Education.

An employer must receive the approval of the Commission before he can employ an apprentice. In addition, the employment of all adult apprentices must be approved by the Apprenticeship Commission. The Commission has the general power to investigate and deal with apprenticeship matters, among which is to determine the term of indenture in any particular trade and to transfer, assign, suspend or cancel indentures as circumstances require.

**Number of New Apprenticeships Commenced: Trade Groups, South Australia**

Trade	1974	1975	1976	1977	1978
Metal .....	1 535	1 285	1 286	1 482	1 224
Electrical .....	421	403	388	382	352
Building .....	529	551	619	660	344
Furniture .....	234	208	216	181	102
Printing .....	115	59	67	80	56
Vehicle industry .....	180	167	176	173	136
Ship and boat-building .....	18	11	6	6	2
Bootmaking .....	7	17	11	8	18
Clothing .....	—	1	1	1	—
Coopering .....	6	2	1	1	—
Food .....	215	257	251	257	199
Hairdressing .....	348	289	322	296	286
Leather and canvas goods .....	3	1	5	1	1
Miscellaneous .....	20	15	33	23	22
Total all trades .....	3 631	3 266	3 382	3 551	2 742

The following table shows the number of new apprenticeships commenced, indentures completed, indentures cancelled, and apprentices employed at 31 December for the years 1974 to 1978.

**Apprenticeships, South Australia**

Particulars	1974	1975	1976	1977	1978
New apprenticeships commenced .....	3 631	3 266	3 382	3 551	2 742
Number of indentures completed .....	2 477	3 463	2 318	2 788	2 954
Number of indentures cancelled .....	439	484	497	486	396
Number of apprentices employed .....	11 948	11 184	11 580	12 072	11 370

The provision of technical education for apprentices is the responsibility of the Minister of Education. However the Commission has the authority to make recommendations to the Minister on matters affecting technical education and to approve courses of training and instruction for apprentices.

Apprentices generally are required to attend colleges of further education during working hours for eight hours a week or an eight week course in the first and second year and for eight hours a fortnight or a four week course in their third year—a total of 800 hours in their indenture term. Exceptions occur for certain trades.

Although almost all apprentices are required to attend a college of further education to complete a basic training course (during their first three years), facilities are provided for those who are able to attend voluntarily to do so during the fourth and final year of their indenture term. During this year, many apprentices commence studies of an advanced nature most of which are components of various Post-Trade Certificate courses which the apprentices are encouraged to complete after the end of their apprenticeship. These advanced subjects, and others designed to meet special demands for training in new processes and techniques, are also available to adult tradesmen and others employed in industry.

**Effective Apprentice Enrolment in Colleges of Further Education, South Australia**

Colleges	1974	1975	1976	1977	1978
Metropolitan colleges of further education	7 385	7 594	7 737	8 891	8 459
Country colleges of further education .....	1 156	1 102	1 247	1 169	1 074
College of External Studies(a) .....	516	202	177	5	180
Total .....	9 057	8 898	9 161	10 065	9 713

(a) Includes Northern Territory apprentices.

Since 1960 the Commonwealth Development Bank has awarded Post-Apprenticeship Scholarships annually to financially assist young tradesmen and outstanding apprentices to further their education and technical qualifications. The scholarship scheme is administered on behalf of the Bank by the Commonwealth and State Apprenticeship Committee.

**Commonwealth Rebate for Apprentice Full-time Training System**

On 15 January 1977 the Commonwealth Rebate for Apprentice Full-time Training System (CRAFT) was introduced to replace the National Apprenticeship Assistance Scheme. CRAFT is designed to encourage employers to engage more apprentices and to provide improved training in basic practical skills during the early years of apprenticeship.

A tax-exempt rebate is payable to all employers who release their apprentices to attend a basic trade course in technical education. The rebate is \$14 to \$24 for each day of

release depending on the stage of schooling and the trade group. Employers can also qualify for a 40 per cent premium on the CRAFT Technical Education Rebate by engaging an apprentice who has completed an approved pre-employment training course which results in a reduction of the normal period of apprenticeship by a minimum of six months.

In addition to these basic payments, tax-exempt rebates are payable to employers to encourage them to allow their apprentices to engage in full-time off-the-job training in basic practical skills. Rebates of \$14 to \$19 per day, depending on the trade group of the apprentice, are payable for each eligible apprentice throughout the training period up to a maximum of 130 days in the first year of the apprenticeship. Employers who make available their own training facilities for use by other employers are eligible for further assistance which is determined by the Department of Employment and Youth Affairs and related to the recurrent costs of training provided. Small firms who form co-operative groups to provide training in approved additional skills for their apprentices are eligible for financial assistance under CRAFT. A \$1 000 Employer Cash Rebate will be paid to employers for each additional new apprentice based on a comparison with the number of apprentices engaged previously.

A group training scheme exists whereby apprentices, sponsored by employers in the private sector and engaged as additional apprentices to the employers' normal annual requirements, receive full-time off-the-job training in a Commonwealth or State Government Training Centre during the first year of their apprenticeship. Wages and costs relating to this year of training are paid by the Commonwealth Government.

A living-away-from-home allowance is payable to both country and metropolitan apprentices required to live away from home in order to obtain or remain in an apprenticeship. This allowance, which offsets some of the extra costs associated with living away from home, is paid at the rate of \$22 per week for first year apprentices and \$9 per week for second year apprentices. This allowance is subject to tax.

## OTHER TRAINING

### Trainer Training and Training Development Services

As part of its responsibility in implementing an effective national manpower policy, the Department of Employment and Youth Affairs has established Training Development and Trainer Training Services to improve the extent and quality of training practices throughout industry and commerce. In addition, an advisory service is provided to assist companies to start or extend training in a systematic way.

Training Development provides an advisory service aimed at the promotion of additional and better training in, and for, industry and commerce. Activities range from assisting Industry Training (Advisory) Committees to examine specific manpower problems, to the distribution of *Training Talkback*, the journal of the National Training Council. In addition to publicising the training services of the Department, the Service acts to create an awareness of all training resources available in South Australia. Another responsibility is the administration of the Manpower Development Scheme which provides a subsidy for qualifying associations and Industry Training Committees to employ training specialists.

The general aims of the Trainer Training Service are to promote training as a concept in industry and commerce, and to improve training standards. The Service is directed at those with responsibilities for training others, including manpower training—instructional specialists and line personnel with duties for administering or implementing training. The Service is divided into several trainer training areas: Training Officer Service, Instructor Service and a Supervisor Trainer Service.

The Training Officer Service is provided to train Training Officers and Manpower Development Officers. This is achieved by an eighteen-week Training Officer (Development) Program which is conducted in Adelaide, Melbourne, Sydney, Brisbane and Perth. The course covers the following broad topics at Supervisor and Operator level: Assessment of Training Needs; Development of a Course; Conduct of a Course; Evaluation of Results; and Administration of a Course. The course includes eight weeks in a training centre and two, five-week practical assignments in a host organisation.

The Instructor Service aims to provide basic instructional techniques for those who instruct groups of employees and those who provide individual instruction on the job. The Service offers Group Instructor, Operator-Instructor and Clerk-Instructor courses.

The Supervisor Training Service aims to provide resources to trainers to meet some basic needs of supervisors. Trainers in this Service may be engaged in full-time or part-time training duties. The courses covered include Instruction-Communication, Interpersonal Relations, Accident Prevention and Method Improvement. Instructional skills training conducted by or for industry can attract support under the Trainer Training Subsidy Scheme.

### National Employment and Training System

The National Employment and Training System (NEAT) provides a comprehensive system of labour training able to remedy labour imbalances in industrial sectors and geographical regions. NEAT forms a basis for the Commonwealth Government's manpower policy, and is designed for operation by the Commonwealth Employment Service with the following broad objectives:

- to alleviate unemployment wherever it may occur and to overcome shortages of skilled labour;
- to assist in the long-term restructuring of the workforce, promote regional development, and improve the general level of available skills;
- to serve the social and economic needs of the community by means of special assistance, guidance, remedial training, and other measures designed to improve employment opportunities.

The NEAT System supersedes other employment training schemes such as those for women, widow pensioners, war widows, persons displaced by redundancy or technological change, Aboriginals, general retraining for employment and rural reconstruction. NEAT assistance is available to persons genuinely needing help to find suitable employment. Individuals assisted under NEAT must have specific employment objectives, which should be realistic for the individual and compatible with the requirements of the labour market. The system has special provisions to assist Aboriginals to enter the workforce.

Approved training can be undertaken full-time or part-time at training institutions, within industry or commerce, or by correspondence course. Persons undertaking full-time formal studies through NEAT are paid a weekly allowance which is income-tested. Companies providing on-the-job training for NEAT trainees receive a percentage of the average adult male award wage as a subsidy.

The Special Youth Employment Training Program (SYETP) has been introduced as an extension of the NEAT system to provide young people (who have had difficulty finding employment) with marketable skills and work experience by subsidising employers willing to provide training.

The Education Program for Unemployed Youth (EPUY) is an education-based program administered jointly by the Commonwealth Department of Education, the Department of Employment and Youth Affairs and the State Department of Further Education.

The Primary purpose of the program is to improve the employability of those young unemployed people who are considered to have continuing employment difficulties as a result of inadequate educational development.

The objective of the Community Youth Support Scheme (CYSS) is to improve or maintain the employment related skills of young unemployed people. It is a community based scheme and local community groups are funded to operate projects which are relevant to the needs of young unemployed people. Participants are not paid a wage but travelling expenses may be reimbursed without interruption to receipt of unemployment benefits.

#### **Former Regular Servicemen's Vocational Training Scheme**

The objective of the Former Regular Servicemen's Vocational Training Scheme (FRSVTS) is to assist former regular service personnel who have long service, or who have been retired on medical grounds, to rejoin the civilian workforce.

Assistance under FRSVTS is available to former regular service persons who have either been honourably discharged after completing at least fifteen years effective full-time service or who have been discharged on grounds of invalidity and are entitled to an A or B class pension under the Defence Forces Retirement Benefits and Defence Force Retirement and Death Benefits legislation. To qualify for assistance under FRSVTS it is not necessary for the applicant to be seeking training for an occupation in demand in the labour market as is the case with the National Employment and Training System (NEAT). Approved training is normally undertaken full-time or part-time in established public educational training institutions. Courses considered as non-vocational will not be approved. Approved trainees are paid NEAT allowances subject to the same income qualifications as NEAT.

There is no provision under FRSVTS for on-the-job training, and therefore consideration may be given to training of this type under NEAT. The fact that a person has completed training under FRSVTS does not exclude him from consideration for on-the-job NEAT training.

#### **STATE EXPENDITURE ON EDUCATION**

The following table shows details of outlay by the South Australian Government on education for the past four years.

**Consolidated Revenue Account: Outlay on Education, South Australia<sup>(a)</sup>**

Purpose	1974-75	1975-76	1976-77	1977-78
		\$'000		
General administration, regulation and research .....	7 028	8 608	11 742	14 366
Transportation of students .....	3 650	4 940	5 861	6 846
Primary and secondary education .....	167 168	213 319	259 125	285 656
Vocational training .....	12 337	15 574	19 150	24 387
University education <sup>(b)</sup> .....	149	-16	-32	-28
Other higher education .....	10 781	11 462	10 402	7 727
Other education programs:				
Handicapped children .....	2 314	2 944	3 382	6 915
Adult education .....	3 210	4 952	6 310	5 209
Pre-school and childcare .....	5 835	10 234	11 868	12 340
Other .....	327	436	1 739	2 164
Total .....	212 799	272 453	329 547	365 582

(a) Charges for goods and services supplied have been excluded from receipts and deducted in calculating outlay.

(b) Includes expenditure on general research.

**Further References**

Additional information may be found in the following publications:

**South Australian Office**

4202-4 *Schools*

4401-4 *Statistics of Day Care Centres and Pre-School Centres*

**Central office**

4206-0 *Colleges of Advanced Education*

4208-0 *University Statistics, Part 1—Students*

4209-0 *University Statistics, Part 2—Staff and Libraries*

4210-0 *University Statistics, Part 3—Finance*

## **6.3 SCIENTIFIC AND RESEARCH ORGANISATIONS**

### AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

The Australian Mineral Development Laboratories (AMDEL) is a contract research and technical consulting organisation serving the mineral industry in Australia and overseas. AMDEL is controlled by a Council which is responsible for the formulation of policy and directed by a Board of Management. The Managing Director has a seat on the Board. A wide range of services is offered including chemical analysis, mineralogy, petrology, ore reserves calculations, mine planning, mineral engineering, chemical metallurgy, process design and control, plant evaluation and commissioning, materials science and engineering, computer techniques and process instrumentation and control.

AMDEL employs approximately 190 people, including about sixty with professional degrees. It maintains extensive laboratories and pilot plant equipment in Adelaide. Much of the analytical chemistry work is computerised. A small laboratory operates in Perth.

Contract research earnings are approximately \$5 million annually.

### AUSTRALIAN MINERAL FOUNDATION

The Australian Mineral Foundation has been established by the industries, institutions and departments concerned with minerals and petroleum. It is administered by a council representative of these groups.

The mining and petroleum industries are confronted with a rapid development in technology and a continual requirement for transmitting new information both to operating staff and to postgraduate students. The Foundation fills this communication need in several ways:

- (a) by providing short-term concentrated training courses for professional and other specialised staff;
- (b) through the medium of symposia, conferences and distinguished lecturers;
- (c) through a specialised resource centre including a geoscience library and information service;
- (d) by selective film showings.

In addition an auditorium, seminar rooms, offices and extensive catering facilities are made available for conventions.

### AUSTRALIAN WINE RESEARCH INSTITUTE

The Australian Wine Research Institute situated at Urrbrae promotes research and other scientific work for the Australian wine industry; it was established in 1955, having grown from a small research unit formed in 1934 within the University of Adelaide.

The Institute is administered by a nine-member council consisting of representatives from the Australian wine industry, the Commonwealth Government, the Commonwealth Scientific and Industrial Research Organization, the University of Adelaide, and scientific advisers. It is funded by contributions from the Australian wine industry, a grant from the Commonwealth Government, and income from a Trust Fund.

Comprising laboratories and an experimental winery, the Institute conducts research into wines, brandies, and winemaking and specialises in the microbiology and chemistry of wines and brandies. A technical advisory service assists commercial winemakers with technical problems. Tested yeast cultures for wine fermentation are made available to the wine industry.

The John Fornachon Memorial Library maintained by the Institute is a specialised library of technical literature on wine.

### COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANIZATION

The Commonwealth Scientific and Industrial Research Organization (CSIRO) is the largest scientific research organisation in Australia. It has a total staff of approximately 7 000 located in more than 100 laboratories and field stations throughout Australia: about one-third of the staff are scientists.

CSIRO is a statutory body established by the *Science and Industry Research Act 1949*. Under the Act CSIRO replaced, but had continuity with, the former Council for Scientific and Industrial Research (CSIR) which was established in 1926. The *Science and Industry Research Act 1949* as amended by the *Science and Industry Research Amendment Act 1978* provides that the functions of CSIRO are:

- (a) to carry out scientific research for any of the following purposes:
  - (i) assisting Australian industry,
  - (ii) furthering the interests of the Australian community,
  - (iii) contributing to the achievement of Australian national objectives or the performance of the national and international responsibilities of the Commonwealth,
  - (iv) any other purpose determined by the Minister,
- (b) to encourage or facilitate the application or utilisation of the results of such research;
- (c) to act as a means of liaison between Australia and other countries in matters connected with scientific research;
- (d) to train, and to assist in the training of, research workers in the field of science and to co-operate with tertiary education institutions in relation to education in that field;
- (e) to establish and award fellowships and studentships for research, and to make grants in aid of research;
- (f) to recognise associations of persons engaged in industry for the purpose of carrying out industrial scientific research and to co-operate with, and make grants to, such associations;

- (g) to establish, develop and maintain standards of measurement of physical quantities and, in relation to those standards;
  - (i) to promote their use;
  - (ii) to promote, and participate in, the development of calibration with respect to them, and
  - (iii) to take any other action with respect to them that the Executive thinks fit,
- (h) to collect, interpret and disseminate information relating to scientific and technical matters; and
- (j) to publish scientific and technical reports, periodicals and papers.

The Act provides for CSIRO to be governed by an Executive comprising a full-time Chairman, two other full-time Members and between three and five part-time Members. It also provides for a statutory Advisory Council and State Committees as independent sources of advice to the Executive.

CSIRO's research is carried out in 38 Divisions and 6 smaller units, three of which have their headquarters in South Australia: these are the Divisions of Horticultural Research; Human Nutrition; and Soils. Two other Divisions, Applied Physics and Materials Science, have branch laboratories in Adelaide.

#### **Division of Applied Physics, Adelaide Branch Laboratory**

The Division of Applied Physics, a member of the Institute of Physical Sciences, has its headquarters at the National Measurement Laboratory, Sydney, with branches in Adelaide and Melbourne. The Division undertakes research in applied physics related to problems in industry and the community, and collaborates with industry in exploiting promising developments. The Division is also responsible for the establishment and maintenance of the Commonwealth legal standards for the measurement of physical quantities and the provision of means of relating measurements, made throughout Australia, to these standards. The Laboratory has a number of research programs including studies in solid-state physics, the physics of fluids, optics, magnetic and dielectric properties of materials, acoustics, and vibration.

The Adelaide Branch Laboratory was formed at Woodville North in September 1977, incorporating staff and facilities from part of the former South Australian branch of the Materials Research Laboratories, Department of Defence. The role of the Laboratory includes the establishment of a close liaison with industry and Government departments to assist in solving problems associated with precise measurements using staff expertise from the Adelaide, Sydney or Melbourne Laboratories. The Branch also provides a calibration service in certain fields, particularly in temperature, electrical and physical (mass, volume, density) metrology. The Adelaide Laboratory is the principal Australian centre for the measurement of the thermal characteristics of heat insulating materials and the existing facilities have recently been extended to handle materials and temperatures in frequent use in industry.

#### **Division of Horticultural Research**

This Division is concerned primarily with research on perennial fruit crops. It has a headquarters laboratory in Adelaide, a further laboratory at Merbein, near Mildura, and staff stationed at the CSIRO Laboratories at Darwin. The Division is a member of the Institute of Biological Resources.

Research is related to four main areas; grapevines, sub-tropical and tropical tree fruits and nuts, the effects of salinity on plant performance and the more fundamental physiological and biochemical aspects of plant growth and reproduction. The Division is investigating the effects of environmental factors, including light quality and tempera-

ture, on plant growth, the influence of plant hormones on plant performance and the development of the photosynthetic system of plants. Research on plant reproduction concentrates on pollination and fruit development studies in a range of plants including avocados and grapevines. A program of controlled breeding of avocados is associated with this work. Tissue culture for the purposes of propagation and asexual breeding is also under study, as are the taxonomy, ultrastructure and host-parasite relations of a range of plant parasitic nematodes including those from northern Australia.

The Division's salinity research is concerned with the responses of plant species to salt stress with the aim of selecting and breeding more salt tolerant horticultural crops. Viticultural research is concerned with breeding grapevines better suited to the hot inland irrigated regions of Australia and with developing vine management systems that increase yields and reduce costs. Methods of eliminating vine viruses are also under study. Tree crop research aims, firstly to develop alternative perennial crops for the temperate, inland irrigated areas of Australia and secondly, to introduce and evaluate new horticultural crops for the tropical north and central regions of the continent.

#### **Division of Human Nutrition**

The Division of Human Nutrition, a member of the Institute of Animal and Food Sciences, has its headquarters and main laboratories in the grounds of Adelaide University. It also has facilities at the Glenthorne Field Station at O'Halloran Hill.

The Division studies nutritional processes with a view to identifying the existence and health consequences of nutritive imbalances and deficiencies in Australian diets. Its research includes experimental studies in inorganic nutrition and in metabolism and digestion and epidemiological and behavioural studies, with emphasis on the relationships between nutrition, lifestyle, and human health.

#### **Division of Manufacturing Technology**

CSIRO has created a new Division of Manufacturing Technology within the Institute of Industrial Technology. The new Division incorporates the Production Technology Laboratories of the Division of Materials Science. It will operate initially from laboratories in Adelaide and Melbourne.

Production technology research is carried out for the purpose of providing new and improved methods and products for use in Australian manufacturing industry. The present programs encompass a range of forming processes from both solid and liquid metal. The Division's Adelaide laboratory is concerned with industrial production technology. New facilities are in operation for undertaking research and development on an industrial scale in welding, ferrous casting, forging, and in aspects of surface coating such as plasma spraying for wear and corrosion resistance.

#### **Division of Soils**

The Division of Soils is a member of the Institute of Earth Resources, which conducts research relating to the more effective definition, utilisation and management of Australia's land, water, minerals, energy and atmospheric resources. The research of this Division is concerned with the use of soils in agriculture and forestry, and the role of soils and soil materials in hydrology, plant growth, as habitats for flora and fauna and as a base for engineered structures. The work is organised into several programs, each of which comprise a number of projects. Because soil is a complex mixture of organic and inorganic materials, with a micro-flora and micro-fauna that vary with the material from which it was formed, the climate in which it occurs, and the plants and animals that occupy its surface, very few problems in soils are capable of an unidisciplinary solution.

Scientists in the Division are loosely grouped together to tackle problems in four major

areas namely (1) to provide an inventory of Australia's soil and water resources; (2) to maintain and improve plant production through modifying the chemical, physical and biological properties of soils; (3) to understand the principles of erosion with a view to its control; and (4) to identify and correct soil problems arising from natural and man-made alteration of the environment. Within each area understanding of the fundamental processes occurring in soils is sought along with practical solutions to problems arising from the use of soils.

The headquarters laboratory is in Adelaide, with smaller groups in regional laboratories in Brisbane, Canberra, Hobart, and Townsville. About half the staff are in the Adelaide laboratories.

#### INSTITUTE OF MEDICAL AND VETERINARY SCIENCE

The Institute of Medical and Veterinary Science was established in 1937, under the Institute of Medical and Veterinary Science Act, 1937-1978, to incorporate the functions of the former Adelaide Hospital Laboratory. The Director of the Institute is the chief executive officer of the council which is responsible to the Minister of Health.

The Institute provides diagnostic facilities in all branches of laboratory medicine for the Royal Adelaide Hospital and other metropolitan and country hospitals, for public health authorities, for industry, and for private practitioners. It also undertakes work in all branches of veterinary pathology for the Department of Agriculture and for veterinary practitioners and stockowners. Research is conducted into selected problems connected with disease in man, and in animals. The staff of the Institute take part in the teaching of the medical sciences to graduates, students and technicians.

The Institute is financed partly by an annual grant from the State Government, and by its earnings from private practice in laboratory medicine. Its research and development projects are assisted by the National Health and Medical Research Council of Australia, the Australian Wool Corporation, the Australian Meat and Livestock Corporation, the Australian Research Grants Commission, certain private firms and by private benefactors.

**The Institute of Medical and Veterinary Science**

Particulars	1975-76	1976-77	1977-78	1978-79
Staff at end of year:				
Graduate .....	190	215	224	231
Other .....	559	612	636	629
Tests performed .....	3 499 097	3 786 042	n.a.	4 426 262
Revenue:		Dollars		
State Government grant .....	1 000 000	1 110 000	2 295 000	2 567 600
Fees for laboratory tests .....	7 569 329	9 454 380	10 683 873	11 711 913
Other .....	352 798	497 846	857 345	1 086 165
Total .....	8 922 127	11 062 226	13 836 218	15 365 678
Expenditure:				
Salaries and wages .....	6 916 506	8 221 136	9 939 972	10 888 557
Other .....	2 149 419	3 239 343	3 552 322	3 824 585
Total .....	9 065 925	11 460 479	13 492 294	14 713 142

At the Royal Adelaide Hospital the Institute operates a Blood Transfusion laboratory, a Division of Nuclear Medicine and undertakes all required autopsies. Institute medical staff also take an active part in patient care by providing the clinical requirements of certain wards of the Royal Adelaide Hospital. To meet the need for blood transfusion and laboratory services in rural areas, regional laboratories exist in nine towns.

A computerised system of laboratory reporting, accounting and data storage for rapid retrieval has been running successfully for some years. There are three remote terminals linked to the central computer, one at Modbury Hospital, one at the Lyell McEwin Hospital and one in the Casualty Section of the Royal Adelaide Hospital; further units will be provided in the intensive care wards. Telex links are operating to Port Lincoln, Port Augusta, Whyalla, Mount Gambier, Naracoorte, Keith, Murray Bridge, Coober Pedy and Berri.

The Division of Tissue Pathology is now closely linked with the University of Adelaide by the joint appointment of a Professor of Tissue Pathology, University of Adelaide and Head of the Division of Tissue Pathology, Institute of Medical and Veterinary Science. A further advancement is the appointment of the Head of the Division of Virology, Institute of Medical and Veterinary Science as Clinical Professor of Microbiology, University of Adelaide.

#### WAITE AGRICULTURAL RESEARCH INSTITUTE

The Waite Agricultural Research Institute was established, within the University of Adelaide, in 1924. The research projects conducted at the Institute cover a wide range of topics, of which the following are a few examples: relationship of stocking rates to pasture composition and fertiliser practices; the protein chemistry of the wheat grain; the genetics and breeding of cereals and pasture plants; flower and fruit development in horticultural plants; studies on soil-borne and virus diseases of plants; biological control of insect pests; the biochemistry of nitrogen fixation; and the studies of soil structure and mechanics.

Further details relating to the Waite Institute may be found in Part 6.2 Education.

#### DEFENCE RESEARCH CENTRE

The Defence Research Centre Salisbury (DRCS), formerly the Weapons Research Establishment, is the largest research and development complex within the Defence Science and Technology Organisation (DSTO) of the Commonwealth Department of Defence. The Centre occupies an area of 1 170 hectares at Salisbury and its staff numbered 2 721 at 1 October 1979. It also provides facilities within the area for branches of firms which have contracts in the defence field.

The DRCS comprises four separate Laboratories and a supporting Administration Branch. The Electronics Research Laboratory (ERL) undertakes research and development in radio, electronics, radar, infra-red applications, optics, electro-optics, electronic warfare, surveillance and navigation. The Weapons Systems Research Laboratory (WSRL) undertakes research and development related principally to guided weapon systems, aeroballistics, underwater detection, undersea warfare and ordnance. The Advanced Engineering Laboratory (AEL) undertakes engineering feasibility studies, development, design and manufacture of experimental and prototype systems and equipment for the Australian Defence Force and in support of other DSTO laboratories in the fields of mechanical, electronic and communications engineering. It also provides advanced manufacturing techniques and processes, quality engineering, environmental testing, engineering services and facilities, drafting, library, documentation and publishing services for the other DRCS Laboratories. The Trials Resources Laboratory (TRL) is responsible for the operation of the Woomera Range under a Joint United Kingdom-Australian arrangement (the Joint Project which began in the late 1940s), and

for the conduct of trials and analysis of exercises for the Australian Services and the DSTO at Woomera and elsewhere. It undertakes the planning, provides and operates the instrumentation and reduces and analyses data associated with these activities. The Joint Project Agreement between Australia and the United Kingdom will end in mid-1980 and much of TRL's current activity is associated with the reduction and re-orientation of the Woomera Range to meet Australian needs. In the second half of the 1980s it is expected that the Australian Services will begin to make more use of the Woomera area for trials and training purposes.

Each Laboratory at DRCS provides specialised consulting services for the Defence Force, the Canberra based staff and other laboratories of the DSTO and, where appropriate, to industry.

Edinburgh Airfield which adjoins Defence Research Centre Salisbury is the headquarters of the Royal Australian Air Force (RAAF) in South Australia and is a fully operational RAAF base. When necessary, aircraft used in trials are operated from this base.

A special article on the Defence Research Centre together with maps and diagrams was included on pages 184-92 of the *South Australian Year Book 1969*.

#### Woomera

Woomera comprises a large restricted area of some 130 000 square kilometres encompassing an instrumented Range, Service exercise and training areas, a TRL responsibility, and a township and adjacent technical facility now designated the Defence Support Centre Woomera (DSCW), a direct DSTO responsibility.

A Joint USA/Australia Defence Space Communications Station (JDSCS) is located near Woomera and this also makes use of the DSCW.

The Woomera township is situated approximately 500 kilometres north-west of Adelaide. Currently its population is about 2 500, including 1 000 associated with the JDSCS, and all necessary amenities and services, including hospital, schools, community store and shops, churches, theatre, clubs and a wide range of sporting facilities.

## 6.4 CULTURE AND RECREATION

### LIBRARIES

#### The State Library

The State Library of South Australia has its origin in a collection of books assembled in London in 1834, two years before the province of South Australia was founded. The modern character of the Library was established in 1940 when, after the Price Report of 1937, the Library was separated from the Museum and Art Gallery and became a State Government department administered by the Libraries Board of South Australia. In 1979 the State Library became a Division of the Department of Local Government.

The oldest section of the Library is the Reference Library, which is the central basic collection. Since 1946, except for rare irreplaceable volumes and reference works, most of the books have been available for loan. Over 4 400 periodicals are received annually, and the Newspaper Reading Room files nearly 300 overseas and Australian newspapers; in 1978-79, 50 600 periodicals were lent. In the same year the Map collection answered 6 600 inquiries for its 68 000 maps. Legislation since 1878 provides for the deposit in the Library of copies of all items published in South Australia.

The Reference Library has a representative basic collection of nineteenth and twentieth century material in all subjects except medicine and law. It has considerable

strength in a number of subjects including librarianship, wine, jazz, Australian Aborigines, River Murray shipping, sailing ships, and nineteenth century illustrated works on natural history. In addition there is a collection of tape recordings of Australian authors, folk songs and Aboriginal music. The Library is an official depository for the publications of the Australian Government, and receives selected publications from the British and United States Governments and the United Nations.

In 1978-79 the Reference Services Branch answered 178 000 inquiries. This Branch supplies lists of references and arranges for the borrowing of books, periodicals and photocopies from libraries in other States and overseas. *Pinpointer*, a bi-monthly index to popular periodicals and the quarterly *Index to Australian Book Reviews*, are published.

In 1919 the Archives Branch was established for the collection of original South Australian historical material. In 1925 legislation was passed requiring reference to the Libraries Board before destroying or disposing of public documents. At the end of June 1979 there were 14 900 metres of occupied shelf space in the Archives. In 1978-79, 9 900 inquiries were dealt with involving 35 800 issues of documents, views, maps or printed sources. A journal, *South Australiania*, is published twice a year.

The Young People's Services Branch includes the Children's Services and the Youth Lending Service. The Children's Services, formerly the Children's Library, was established in 1915 and is believed to be the oldest in Australia. The carefully selected stock includes some 33 700 books in the Children's Literature Research Collection, a special collection assembled to assist in the study of children's books. School classes visit the Library, and talks and stories are addressed to groups of children, both inside the Library and at outside venues, and to groups of parents and various societies. There are 26 300 registered borrowers in the metropolitan area and books are sent to 3 600 country children living in areas that do not have a public library.

To cater for the needs of young people between the ages of thirteen and eighteen the Youth Lending Service was established in 1957. Over 24 800 young people from the metropolitan area and country places are enrolled as members in the Service. The collection includes, besides general literature, publications of special interest to young people dealing with hobbies and careers. Cassettes, posters and paperbacks are also available for loan.

#### State Library of South Australia

Year	Refer- ence Library	Children's Services	Adult Lending Services	Central Pool for Local Public Libraries	Youth Lending Service	Total
<b>At 30 June:</b>						
				<b>VOLUMES HELD</b>		
1975 .....	339 000	65 000	85 000	155 000	22 000	666 000
1976 .....	355 000	64 000	67 000	180 000	25 000	691 000
1977 .....	371 000	64 000	80 000	180 000	23 000	718 000
1978 .....	386 000	74 000	113 000	265 000	27 000	865 000
1979 .....	399 000	74 000	130 000	200 000	27 000	830 000
<b>To 30 June:</b>						
				<b>VOLUMES LENT</b>		
1975 .....	113 000	263 000	609 000	—	118 000	1 103 000
1976 .....	94 000	244 000	656 000	—	126 000	1 120 000
1977 .....	96 000	262 000	861 000	—	133 000	1 352 000
1978 .....	92 000	266 000	896 000	—	127 000	1 381 000
1979 .....	80 000	252 000	876 000	—	149 000	1 357 000

In 1938 a Country Lending Service was established to provide books for residents in the country districts of the State, none of which had a free local public library at the time. The service continues today, but is restricted to residents of local government districts which have not yet established their own public library service, and to people in the unincorporated districts of the State. In 1946 the Adelaide Lending Service was founded so that residents of the metropolitan area might enjoy direct borrowing privileges. In 1972 these two services were amalgamated to form the Adult Lending Services Branch, and at the same time the children's and young people's collections previously functioning as part of the Country Lending Service were taken over by the Children's Services and Youth Lending Service respectively.

Since 1972, the Adult Lending Services Branch has enlarged its collection to include large print and foreign language books and periodicals, paperbacks, prints, posters, and cassettes, including music, spoken word and 'learn the language'. There are in excess of 17 000 cassettes in the collection and, despite a limit of three per borrower, loans exceeded 120 000 in 1978-79. Car manuals, musical scores and drama sets are also available. The Branch supplies bulk loans to several hospitals and institutions, and to a number of prisons in South Australia. Extension services also cater for housebound residents and invalids. Non-technical inquiries and requests for information are dealt with at the Readers Adviser Desk. The total number of adult borrowers in the metropolitan area is in excess of 92 000, and there are more than 3 400 adults in the country registered as borrowers from the Adult Lending Services.

Photographic and electrostatic copying facilities are available to the public. In 1962 the Libraries Board began an extensive program of publishing facsimile editions and other works of Australian interest. Over 200 works have now been published, including the first edition ever of *The Journal of Post Captain Nicolas Baudin*. Other publications include several series of *Occasional Papers* in various subject fields.

#### Local Public Libraries

In June 1979, thirty-eight local authorities were operating a total of sixty public libraries including six school-community libraries and eight mobile libraries, plus two mobile libraries financed by the State Government, under the provisions of the Libraries (Subsidies) Act, 1955-1977. This Act, which gives the initiative for the establishment of free public libraries to local government, provides for the payment of subsidies (\$1 for \$1 based on all aspects of local government library expenditure) conditional upon a report on the matter by the Libraries Board to the State Treasurer. In 1978-79, subsidies amounted to \$2 545 000. The provision of bookstocks and other materials to public libraries operating under this Act is centred in the State Library, through its Public Libraries Branch, which also provides a Request and Reference Service to member libraries as a free service, as well as professional assistance to librarians and local authorities. This service includes advice on siting, and on internal planning of library buildings.

**Local Public Libraries, South Australia**

Year	Libraries at End of Year	Registered Readers	Books Lent	Stocks at End of Year
1974-75 .....	35	162 000	3 228 000	442 000
1975-76 .....	37	187 000	3 882 000	564 000
1976-77 .....	37	211 000	4 667 000	613 000
1977-78 .....	39	244 000	5 215 000	662 000
1978-79 .....	60	259 000	6 217 000	863 000

In the year ending 30 June 1979 the annual new book provision amounted to 196 000 volumes in addition to 41 000 paperbacks and 22 000 sound recordings. About 10 000 volumes were sent to libraries in answer to requests, from a central pool of 200 000 volumes maintained in the Public Libraries Branch.

### **Institute Libraries**

Several country and suburban centres had formed institutes in the early 1850s. The first legislation on libraries was passed in the 1855-56 session of Parliament and resulted in the establishment of the South Australian Institute. In 1861, a new building was erected on the corner of North Terrace and Kintore Avenue for the Institute, which in 1884 was divided into two organisations, the Public Library and the Adelaide Circulating Library.

Institute libraries, which are situated in metropolitan and country areas throughout the State, are largely dependent on members subscriptions and in some cases on income from the institute hall, but they also receive a government subsidy and about two-thirds of them receive support in varying degrees from local councils.

The Institutes Association of South Australia Inc. acts as a co-ordinating authority and as a purchasing agency for affiliated institutes; these, however, retain complete autonomy, being governed by a committee elected by members. The conduct of institutes is regulated by the Libraries and Institutes Act, 1939-1979.

The borrowing facilities of institutes are available to subscribers and the general public has access to, and the use of reading facilities in the library. Many institute libraries allow children to borrow books from the library without charge.

The number of institutes is continuing to decline with the expansion of Public Library services and institute libraries will be eventually phased out. This policy is being pursued with the co-operation of the Institutes Association of South Australia.

### **Institute Libraries, South Australia**

**At 31 December**

Particulars	1975	1976	1977	1978
Number of institutes .....	171	167	163	155
Subscribers .....	46 330	45 308	42 415	35 224
Number of volumes .....	737 054	731 354	718 283	664 284
Volumes circulated during year .....	1 654 818	1 384 509	1 308 001	1 126 302

### **Other Libraries**

Particulars relating to the Barr Smith Library at the University of Adelaide (992 000 volumes, including 84 400 microforms, at the end of 1978), the Flinders University Library (440 000 volumes at the end of 1979) and the South Australian Institute of Technology Library (170 000 volumes at the end of 1979) are given in Part 6.2. Other libraries include those of the Royal Society of South Australia specialising in natural history periodicals (approximately 30 000 volumes), the South Australian Branch of the Royal Geographical Society of Australasia (approximately 15 000 volumes) and the Parliamentary Library (about 70 000 volumes).

## MUSEUMS

**The South Australian Museum**

Founded in 1856 as part of the South Australian Institute, the South Australian Museum became a separate institution with its own board in 1940 under the provisions of the Museum Act, 1939, which was administered by the Minister of Education. In 1972 it became a Division of the Department for the Environment. A new South Australian Museum Act was proclaimed on 11 March 1976, in which the present-day functions of the Museum were defined. In October 1977 the Museum was made a Division of the Education Department, and in October 1978 responsibility for the administration of the South Australian Museum Act, 1976-1978 was vested in the newly created Ministry of Community Development. In September 1979 the Minister of Arts assumed responsibility for the Act's administration and the Museum became a Division of the Department for the Arts.

The aim of the Museum is to increase man's understanding of himself and his environment. Similar to other major museums in Australia and overseas, it makes and preserves collections, carries out research and acts as an education and information centre for primary, secondary and tertiary students, and for the public. Its main areas of interest are archaeology, history, ethnology, natural history and geology.

The Museum's first permanent building was opened in 1884. It was the West (Jervois) Wing, located on North Terrace. The North (now the Museum's West) Wing was completed in 1895 and the East Wing was added in 1915. Since then the Museum has expanded to occupy the historically and architecturally significant buildings of the Old Police Barracks, three floors of Goldsbrough House further along North Terrace, an office/warehouse complex in Kent Town and a number of other annexes in the metropolitan area. These function mainly as work areas and collection stores. The exhibition galleries are all located in the original buildings.

The South Australian Museum has a staff of seventy-three with sixteen professional research workers responsible for the care of the collections and for carrying out research. Several of the collections of specimens and data are outstanding. The collection of Australian ethnological material is of world renown while those of minerals, meteorites and tektites, insects, Southern Australian animals and New Guinea ethnological objects are excellent.

The research of the scientific staff is primarily systematic, involving the naming, identification and classification of animals, minerals and artefacts, but considerable emphasis is placed also on their distribution in space and time, and interrelationships with the environment. With the current interest in, and need for knowledge concerning conservation and environmental deterioration, this work is of increasing importance. Results of the research work of staff members are published in the *Records of the South Australian Museum* and in scientific journals and books throughout the world. The Museum's Scientific Library houses more than 33 000 books and bound periodicals.

An important recent development was the appointment of a Curator of Conservation in February 1978 with overall responsibility for the proper storage environment, protection and restoration of the collections; particularly perishable ethnographic items. Research into aspects related to improving museum conservation practices is also carried out.

Advice, based on their research results and on their specialised knowledge, is given by the scientific staff to many other research institutions and government departments.

The Museum has a general Information Service dealing with about 10 000 inquiries annually and approximately 30 000 school children pass through the Education Centre each year. With the appointment of more teachers and the development of a Travelling

Education Service (TES), educational programs were extended to country areas in 1976. During 1978-79 over 7 000 country school children took part in TES programs.

Public entertainment and education involves the presentation of temporary and long term displays in galleries covering nearly 4 000 square metres. Exhibits deal with such diverse topics as mammals, birds, fish, amphibians, reptiles, insects, minerals, meteorites, Egyptology, fossils and Australian and Pacific ethnology. The Aboriginal display in the Stirling Gallery is currently being redesigned. Educational booklets on a variety of subjects, mostly written by Museum staff and published by the Museum, are on sale at a nominal price. Postcards and note paper are also published and are sold throughout Australia. The Museum also sells posters and model replicas of extinct animals. Free information leaflets are available to inquirers.

A Museums Extension Service began operation in 1976. The purpose of this is to provide professional museological advice to local museums to improve their ability to preserve, document and display folk cultural material and thereby encourage greater community interest in local history and provide an additional resource for local educational needs. Greatly increased and improved liaison between local museums is a further aim of the Museums Extension Service.

The scientific work of the Museum is supported by the general public, by the many naturalists, and other societies which meet at the Museum and by a number of distinguished scientists who are appointed as Honorary Associates. In particular, the Friends of the South Australian Museum have given considerable support since their foundation in 1964, including the purchase of many notable additions to the collections.

Current plans are for the redevelopment of the Museum on its present site.

#### Other Museums

The Constitutional Museum of South Australia was established in May 1979 to preserve and interpret South Australia's political heritage. It is housed in the old Legislative Council building, South Australia's original Parliament House.

A number of historic residences serve as museums. In 1961 the 'Old Government House' at Belair was refurnished with relics of the colonial era and opened for public inspection. At 'Whalers Haven', Victor Harbor, a pioneer cottage has been restored and features many relics of early settlement with particular emphasis on the whaling industry. The home of the poet Adam Lindsay Gordon, 'Dingley Dell' at Port MacDonnell, is maintained as a historic house and Captain Charles Sturt's original home at Grange is open to the public. Items of historical interest are exhibited in old buildings in many of the early established country towns.

A railway museum has been established and maintained by a voluntary organisation, the Mile End Railway Museum. Locomotives and rollingstock are from the State Transport Authority, Australian National Railways, Silverton Tramway, BHP, BHAS and other private lines which have operated in South Australia. Included in the display are nineteen steam locomotives built between 1886 and 1954, two railcars, two diesels, one petrol locomotive and ten units of passenger and goods rollingstock dating from 1877, as well as a large selection of associated railway equipment. The Museum, at Railway Terrace, Mile End, is open to the public on the first and third Sunday afternoons of each month.

A pioneer art and motor museum is situated at Birdwood. Exhibits include vintage motor vehicles, pioneer domestic appliances and early agricultural machinery.

Various items of maritime association including pictures, models and fittings from early ships are displayed at the Nautical Museum at Port Adelaide.

A number of special museums are maintained at the University of Adelaide for the use

of the staff and students and a Museum of Economic Botany is associated with the Botanic Garden.

### The National Trust of South Australia

The National Trust of South Australia was established by Act of Parliament in 1955. It encourages the preservation and restoration of buildings of architectural, historic or scientific interest, the protection of scenic beauty and the conservation of land, flora and fauna.

The Trust, which is administered by a council, has fifty-two branches spread throughout the State. Finance is provided by means of gifts, legacies, fund raising functions, subscriptions and a government grant.

Buildings of particular significance in South Australia are assessed on their architectural or historic merit and are categorised in accordance with the criterion adhered to by the Australian Council of National Trusts as either:

Classified, *i.e.* buildings having great historic significance or high architectural qualities, the preservation of which is essential to the heritage of the State; or

Recorded, *i.e.* buildings which contribute to the heritage of Australia and which should be recorded and their preservation encouraged.

Examples of the natural areas cared for are 'Wilabalangaloo' at Berri, 'Watiparinga' at Eden Hills, 'Roachdale' at Kersbrook and 'Engelbrook' at Bridgewater. The many beautiful or historic Trust properties include 'Collingrove' in the Barossa Valley, 'Beaumont House', the 'Marble Hill' ruins and reserve, and 'Olive Wood' at Renmark. 'Marble Hill' was officially re-opened on 15 February 1975 and magnificent views of the Adelaide Hills and Plains can be obtained from the restored tower and many vantage points in the thirty-one hectares of park-like setting in which the building stands. Original plans of the building are on view, together with artifacts and photographs of both the exterior and interior before the building was destroyed by fire on 2 January 1955. The original stables have been restored and converted for use as a tea room.

The Trust also owns the G. S. Sandison Reserve at Hallett Cove, an area of international scientific interest because of its glacial pavements.

In 1963 the paddle steamer *Marion* was purchased and refitted and now floats in the old graving dock at Mannum; while the Willunga Court House and Police Station, both built in the mid-nineteenth century, were restored in 1969. In the following year the Trust fully restored the Customs House at Robe and in 1971 played a prominent part in persuading the State Government to save from demolition the architecturally classic and beautiful ANZ Bank Building in King William Street which had been classified by the Trust. This building has been renamed Edmund Wright House and is now occupied by the South Australian Registrar of Births, Deaths and Marriages, and many marriage ceremonies are performed there. Concerts and benefit galas are held also at Edmund Wright House.

At December 1978, the National Trust of South Australia controlled forty-nine reserves totalling 1 184 hectares and some ninety-three restored buildings and other structures, forty-two of which are used as folk museums in various country centres.

The headquarters of the National Trust in South Australia is in the historic and beautiful residence of Ayers House, once the home of the seven times Premier of South Australia, Sir Henry Ayers.

### Aboriginal and Historic Relics

The protection of Aboriginal relics and of traces of the early settlement of the State is governed by the Aboriginal and Historic Relics Preservation Act, 1965. The administration of this Act is the responsibility of the Minister for the Environment.

Remnants of Aboriginal culture such as prehistoric camp-sites, ceremonial grounds, cave paintings, rock engravings and canoe trees are to be found in various parts of the State. Although many such relics have been destroyed in the period of European settlement, a number remain which are of great interest to scholars and tourists. In addition there are some areas of the State where Aboriginal sites are of continuing significance to present-day communities. These relics are protected under the provisions of the Act.

Similarly there are many relics and sites associated with early European settlement which are protected by the Act. These include settlement sites; industrial sites, particularly those associated with the pastoral and mining industries; overland telegraph stations; military installations, marine sites, and historic shipwrecks.

A particular relic or series of relics may be protected by the Governor declaring the area in which it is found either a Prohibited Area or an Historic Reserve. Inspectors and Wardens are appointed to safeguard such areas and the Protector of Relics maintains a complete register of all prohibited areas and reserves, and also of unproclaimed known occurrences of Aboriginal and historic (including technological) relics.

In addition to a number of publications which are available from the Department for the Environment, a special article on Aboriginal relics together with a list of declared areas as at 30 June 1969 was included on pages 201-8 of the *South Australian Year Book* 1969. Areas declared between 1 July 1969 and 31 December 1977 have been included in subsequent issues of the *South Australian Year Book*. An article entitled 'Aboriginal Culture in South Australia' was included in *South Australian Year Book* 1978.

During the period 1 January 1978 to 31 October 1979, no further Historic Reserves or Prohibited Areas have been proclaimed in South Australia.

## ART GALLERIES

### The Art Gallery of South Australia

The National Gallery of South Australia was founded in 1881 as a part of the South Australian Institute which in 1884 became the Public Library, Museum and Art Gallery of South Australia. This institution was dissolved by Act of Parliament in 1940, and the Gallery became a State Government department under the Art Gallery Board. The name was changed to the Art Gallery of South Australia in 1975. The first portion of the present building, the Elder Wing, was completed in 1900, the Melrose Wing on the western side and the facade were added in 1936, in 1962 a three-storey air-conditioned wing was built at the northern end, and in 1979 the remaining galleries were remodelled.

The collections are broad in scope and include a representative selection of Australian and European paintings and sculpture. There are large collections of prints, drawings, silver, glass and ceramics (including an important section devoted to South-East Asia), as well as furniture, arms and armour, and coins and medals. The South Australian historical collection includes relics and pictorial material of the discovery, exploration and settlement of the colony.

In addition to the permanent collections, the Gallery has a full program of visiting international and interstate exhibitions.

The Gallery has received many bequests, the Elder, Morgan Thomas, David Murray, Ragless, Boxall, Mortlock and Kolhagen bequests together totalling over \$252 000. In addition the State Government makes an annual grant for the purchase of works of art.

The staff of professional and technical officers undertake the research and development, care and conservation of the collections and the preparation of exhibits for public education and enjoyment. Free guided tours of the collections are provided by education officers and volunteer gallery guides.

A regular program of film evenings, lectures and demonstrations is given and the Travelling Art Exhibition, a fully equipped van with illuminated portable screens, accompanied by a driver and a lecturer, tours country centres during school term. In 1979, fifty-one centres were visited and the exhibition was viewed by 23 394 adults and children. Another innovation is the introduction of 'Outlook', an art appreciation program taking original works of art into metropolitan schools and public places.

A society, The Friends of The Art Gallery of South Australia, was founded in 1969 for people interested in the fine arts and to create a body of people who would be informed about the activities of the Gallery. Membership stands at 2 627 and falls into five categories—Sustaining, Institutional, Family, Ordinary and Junior.

#### Other Galleries

South Australia's first regional gallery was opened at Naracoorte in 1968. South Australia's two leading art societies, the Royal SA Society of Arts (Australia's oldest art society which was founded in 1856) and the SA branch of the Contemporary Art Society of Australia Incorporated (founded in 1942) conduct exhibitions in their galleries. An exhibition area, known as 'The Gallery', has been provided by the Adelaide Festival Centre Trust. Its inaugural exhibition was staged to coincide with the official opening of the Playhouse on 26 October 1974.

The Jam Factory Workshops Incorporated, formerly the SA Craft Authority, was set up by the State Government in 1974 with administrative offices at St Peters in a large building known as the Jam Factory. The functions of the Workshops are generally to promote and encourage the development of craft industries in South Australia; to make grants or loans to craftsmen and associated industries; to provide workshops and workshop advisory services and to market the products of craft industries and to improve and extend the retail and wholesale markets. Groups already operating there include the Crafts Association of SA and the Experimental Art Foundation Incorporated (SA).

Outdoor exhibitions have been popular among amateur clubs, beginning with the Citizen's Art Group (now the Adelaide Art Society) in 1954. The Advertiser's annual open-air exhibition is supported by professionals and amateurs alike. The 1980 exhibition resulted in the sale of 411 entries valued at \$45 138.

### MUSIC AND DRAMA

#### MUSIC

Regular concerts are given by the Adelaide Symphony Orchestra, in different series and by smaller groups such as the University Music Society, Adelaide Chamber Orchestra, Adelaide String Quartet and Chamber Players of South Australia. Choral music is presented by various choirs in occasional concerts. The State Government's subsidised regional opera company, The State Opera of South Australia, stages regular productions throughout the year in Adelaide and South Australian country centres. School performances aimed at promoting interest in opera are a regular feature of the Company's activities. Concerts are given in a number of country and outer-suburban areas, including an annual series of autumn concerts at Crafers in the Adelaide Hills.

The Festival Centre provides formal and informal venues for a wide variety of performances, from rock concerts to grand opera, and the Rundle Mall is also being used for busking and open-air community arts activities.

#### Australian Broadcasting Commission

In the metropolitan area the Adelaide Symphony Orchestra each year gives twenty-three orchestral subscription concerts and six youth orchestral subscription concerts,

usually featuring overseas conductors and/or soloists. The Australian Broadcasting Commission (ABC) also presents a recital series of six performances by overseas artists. In addition there are at least six free orchestral concerts, a series of three Prom concerts, four family concerts and a number of non-subscription concerts each year.

During 1979 the ABC gave sixteen free concerts and a workshop by the Adelaide Symphony Orchestra for schoolchildren in the metropolitan area. The orchestra gave another ten free concerts for country children.

In addition to its two annual provincial tours, the Adelaide Symphony Orchestra appeared in Sydney, Melbourne and Canberra, giving two adult concerts in each city and two additional concerts for schools in Canberra.

The Adelaide Symphony Orchestra's 1979 engagements include a season of eight performances with the State Opera of South Australia. The Australian Broadcasting Commission also promoted a tour by the Adelaide Chamber Orchestra to Darwin and Alice Springs.

#### **Elder Conservatorium of Music**

The Elder Conservatorium of Music at the University of Adelaide provides a comprehensive course of training for students in courses leading to the degree of Bachelor of Music, and also caters for part-time students by providing instruction in the various branches of music as single studies.

The Elder Hall is the concert hall of the Conservatorium. It was built in 1900 and for many years was a general purpose hall. Since the 1950s it has been used mainly for musical purposes, including public performances. Free lunch hour concerts, open to the public, are given frequently during term time by staff and students of the Conservatorium.

During 1977 the Elder Hall was completely renovated internally at a cost of \$1m, this cost being met from money contributed to the University's Centenary Appeal Fund. The Hall is now a first-class concert hall seating 712 people, with a stage capable of accommodating an orchestra of 75 performers and a choir of 75 people. It is fully air-conditioned, and of excellent acoustical quality. A new organ, built by Casavant Freres of Canada, was installed in June 1979.

Particulars relating to the Elder Conservatorium at the University of Adelaide are given in Part 6.2.

#### **DRAMA**

The State Theatre Company of South Australia has its permanent home at the Playhouse in the Adelaide Festival Centre. Its objective is to promote the art of the theatre by the presentation of performances, commissioning the writing of works, training of persons concerned in theatrical presentations, establishing and conducting educational programs and establishing a theatrical archival collection.

The Company presents two major seasons of plays each year, principally comprising the classics and new Australian work. Each year one of the Company's productions tours South Australian country areas.

The Company has Australia's largest Theatre-In-Education team, 'Magpie', which provides schools (in both metropolitan and country areas) with a team of actor/teachers educating through entertaining students on a participatory level. Additionally, the Theatre-In-Education team presents plays designed to attract families and young people to the theatre at varying times throughout the year.

The main Company also presents rehearsed readings of new plays by Australian writers. Its 'Roadshow' program consists of short easily transportable shows, devised by Company members, which are performed for community groups free of charge.

The Adelaide Festival Centre Trust administers the Festival Theatre, Playhouse, Space, Amphitheatre and Opera Theatre (formerly Her Majesty's Theatre) and is the State's largest entrepreneur of outside productions for these venues. The Festival Theatre attracts productions and performers to South Australia which otherwise might never be seen in South Australia.

The Association of Community Theatres was established in 1975 to provide a system of liaison and communication amongst its member groups. This organisation, which includes amateur and semi-professional groups, and colleges of advanced education, takes special interest in the promotion of South Australian playwrights.

#### **The Adelaide Festival Centre**

The Adelaide Festival Centre is a \$21 million performing arts complex on a 2.5 hectare site located on the banks of the River Torrens near the centre of the city of Adelaide. The Centre comprises a multi-purpose concert hall and lyric theatre, two drama theatres and an open-air amphitheatre. Stage three of the Centre's building project, completed in 1977, comprises a two-level underground car park and 0.75 hectares of open plaza, featuring an overall sculptural design. The erection of additional convention and catering facilities at a cost of approximately \$2 million began in May 1979 and will provide a flexible multi-purpose venue capable of seating 800 people, or 500 at banquets, and able to be partitioned into sound-proof meeting rooms. The restaurant and bar areas will be relocated to take full benefit of the views over Elder Park.

#### *The Festival Theatre*

The \$7.96 million Adelaide Festival Theatre was the first completed auditorium of the Centre and was officially opened on 2 June 1973. Seating nearly 2 000 people on three levels and in a series of tiered boxes, the Theatre has been designed for a kaleidoscopic range of theatre activities, including orchestral concerts and recitals, large-scale opera, ballet and drama, films, musical comedy, variety and jazz concerts, conventions and conferences. The seats extend across the Theatre in continental style with access from large foyers along the sides of the auditorium.

The Festival Centre Trustees have a policy of commissioning and purchasing works of art for the Centre which now has a collection valued at more than \$426 000.

#### *The Drama Complex*

In October 1974 work was completed on the \$7.42 million drama complex alongside the Festival Theatre. The largest auditorium in this complex is The Playhouse, a 600-seat, two-level theatre which is designed for both proscenium and thrust-stage productions.

The Playhouse is the home of the State Theatre Company of South Australia and is served by a production workshop consisting of design studio, carpentry and paint shops, assembly areas, wardrobe, millinery and wigmaking sections and a photographic darkroom.

Alongside the Playhouse and beneath plaza level is The Space, a 320-seat experimental theatre. A completely flexible auditorium, The Space can be arranged in almost any variation of seating and acting areas, and incorporates electronic music facilities. It has been designed as an ideal venue for experimental performances and teaching workshops.

Where the Festival Theatre and Playhouse meet on the Elder Park side of the Festival Centre site, there is an open-air Amphitheatre which is formed by the natural slope of the site where the plaza steps down to Elder Park.

### *The Silver Jubilee Organ*

In April 1979, the Festival Theatre's new Silver Jubilee Grand Organ was inaugurated, as a tribute to the first 25 years of reign of Her Majesty Queen Elizabeth the Second. Built and installed at a cost of \$402 000, it is stored backstage at the theatre and can be moved to different parts of the stage by two people using an air cushion similar to that which operates on hovercraft. It has two consoles, one integral with the instrument and one remote in the orchestra pit, giving it the versatile ability of solo orchestral and operatic performance. The organ has 4 200 pipes, fifty stops, three manual and mechanical (tracker) key action.

### *The Centre's Activities*

Australian national touring companies, The Australian Opera and The Australian Ballet, give annual seasons in the Festival Theatre and the resident Adelaide Symphony Orchestra uses the Theatre for its annual orchestral and youth concert series as well as for special celebrity concerts by international artists and orchestras. The Adelaide Festival Centre Trust and principal Australian commercial entrepreneurs use the Centre for a wide variety of other presentations.

### **The Adelaide Festival of Arts**

In 1958, a small group of Adelaide citizens developed plans for the first Adelaide Festival of Arts, which was held in 1960. Further festivals have been held in March in years of even number from 1962.

The Adelaide Festival has achieved many artistic triumphs in its twenty-year history and has been instrumental in bringing to Australia for the first time many notable overseas companies, performers and artists. It has seen the first performances of scores of major Australian productions and an increasing number of world premieres commissioned specially by or for the Festival. Notable world premieres have included Peter Maxwell Davies' music theatre piece for *The Fires of London*, *Miss Donnithorne's Maggot* (1974), South Australian composer Richard Meale's oboe concerto *Evocations* performed by Heinz Holliger and Collegium Musicum of Zurich (1974), Sir Robert Helpman's ballets, *The Display* (1964) and *Perisynthyon* (1974), Alex Buzo's *Coralie Lansdowne Says No* performed by Sydney's Nimrod Street Theatre (1974), Jack Hibberd's *A Toast to Melba* performed by the Australian Performing Group (1976), and the Patrick White play *Night on Bald Mountain* (1966). First Australian performances have included the Janacek opera *The Excursions of Mr Broucek* (1974), Sir William Walton's *Troilus and Cressida* (1964), Benjamin Britten's *War Requiem* (1964) and his church parable *The Burning Fiery Furnace* (1970), and Sir Michael Tippett's opera *The Mid-summer Marriage* (1978).

World famous writers who have been guests at Festival Writers Week include Yevgeny Yevtushenko, Edna O'Brien, Anthony Burgess, Allen Ginsberg, John Updike, Alan Moorhead, Angus Wilson and Nadine Gordimer.

The completion of the \$21 million Adelaide Festival Centre has caused a shift in the emphasis of the Festival of Arts. The regular appearances of leading overseas performers and companies at the Centre throughout the year has enabled the Festival to engage in activities considered more appropriate to arts festivals. These include the commissioning of new works, the encouragement of local companies and artists and the provision of a variety of programs to attract greater public interest and appreciation.

### *'Come Out'*

In May 1975, the Festival administration, with \$30 000 in special grants from the State

and Commonwealth Governments and a commercial sponsor (The Savings Bank of South Australia), staged 'Come Out', the first in a series of biennial festivals of performing, creative and visual arts for young people. These are now staged in years of odd numbers, between the main Festivals of Arts.

#### Regional Cultural Centre Trusts

The Regional Cultural Centres Act, 1976-1977 provides for the establishment of Regional Cultural Centres, at places designated by proclamation, and for their operation and management. Proclamations have been issued for centres at Mount Gambier, Port Pirie and Whyalla. The powers and functions of each Trust (constituted of six persons—three of whom shall be residents, including two nominated by local Councils) are to establish, maintain, develop, manage and control, a Centre for the performing arts, visual arts and crafts.

The South-East Regional Cultural Centre Trust in conjunction with the Corporation of the City of Mount Gambier, is constructing a complex comprising a theatre, a public library, Corporation offices and Trust offices. It proposes to convert the present Corporation premises into a visual arts gallery. A hall property in Mount Gambier was purchased for use by art and craft groups, and as a temporary Art Gallery.

The other Centre Trusts are conducting surveys of the cultural needs of the people in their regions.

#### BROADCASTING

Radio and television broadcasting falls within the jurisdiction of the Commonwealth Government and, pursuant to the *Broadcasting and Television Act* 1942, is one of the responsibilities of the Minister for Post and Telecommunications. Commonwealth bodies which are directly involved include the Postal and Telecommunications Department, the Australian Broadcasting Commission, the Australian Broadcasting Tribunal, the Australian Telecommunications Commission, and the Special Broadcasting Service.

Basically the Australian broadcasting and television system is comprised of the following types of stations:

- (1) national broadcasting and television stations funded by the Commonwealth Government;
- (2) commercial broadcasting and television stations operated by companies under licence;
- (3) public broadcasting and television stations operated by corporations under licence on a non-profit basis; and
- (4) stations operated under the aegis of the Special Broadcasting Service.

The responsibility for broadcasting planning, including all matters relating to the technical operation of stations, and for the investigation of interference to the transmission and reception of programs, rests with the Minister for Post and Telecommunications.

The Australian Broadcasting Tribunal came into being on 1 January 1977, and is responsible for certain of the functions previously performed by the Australian Broadcasting Control Board (abolished 31 December 1976), including the licensing and supervision of the operation (other than technical aspects) of all stations except national stations and special broadcasting stations. The Tribunal is required to conduct public inquiries into the granting of licences following the invitation of applications by the Minister; the renewal of licences; the setting of standards of broadcasting practices; alleged breaches of licence conditions; and such other matters as the Minister may direct. Subject to the conduct of such inquiries, the Tribunal is empowered to grant,

renew, suspend or revoke licences and to determine program and advertising standards applicable to licensed stations.

### RADIO

There are at present twenty medium frequency radio stations operating in South Australia. In the metropolitan area there are two national, four commercial and one public station, while there are eight national and five commercial stations in country areas. The country or regional stations relay programs from their respective parent metropolitan stations in addition to providing programs to cater for local interests.

Commercial broadcasting stations are operated by companies under licences granted by the Australian Broadcasting Tribunal with technical operating conditions determined by the Minister for Post and Telecommunications. The stations obtain income from the broadcasting of advertisements.

The fee for a licence for a commercial broadcasting station is \$200 plus an amount based on the gross earnings from advertising during the preceding financial year, assessed on a sliding scale varying from 1 per cent for amounts up to \$0.5 m to 6 per cent on amounts exceeding \$5 m.

There is one Frequency Modulation (FM) Service relaying for 24 hours each day from the Australian Broadcasting Commission Collinswood studios in Adelaide to Sydney, Melbourne and Canberra. ABC-FM programs material which specifically benefits from the FM stereo system, predominantly music but including drama, features and stereo documentaries. The broadcast of concerts and operas direct from the Sydney Opera House can also be made over the FM network.

#### Radio Programs

The distribution of types of program matter is set out in the following table.

**Composition of Radio Programs, 1978, All Stations, Adelaide<sup>(a)</sup>**

Category	Commercial	National	Public	Per cent
Entertainment:				
Light and contemporary music .....	55.5	29.4	37.7	
Incidental matter .....	4.0	4.6	4.1	
Foreign language .....	—	—	12.4	
Variety .....	3.1	1.1	0.9	
Drama .....	—	1.7	—	
Classical music and the arts .....	0.1	32.5	24.3	
Information and services:				
News .....	8.7	9.5	0.1	
Sport .....	5.1	3.5	—	
Information .....	1.7	5.4	6.2	
Religious .....	0.3	1.4	—	
Social and political .....	1.9	8.3	7.4	
Family .....	1.4	0.6	0.2	
Children's .....	—	1.0	—	
Education .....	—	0.9	6.7	
Publicity .....	0.5	0.1	—	
Advertisements .....	17.7	—	—	
Total .....	100.0	100.0	100.0	

(a) Percentage of transmission time (6 a.m. to 10.30 p.m.) in each category.

### Radio Stations

The call signs and locations of stations are given in the following table: all call signs in South Australia are prefixed by the number '5'.

**Radio Stations: Medium Frequency, 30 June 1979  
South Australia**

National Stations		Commercial Stations		Public Stations	
Call Sign	Location	Call Sign	Location	Call Sign	Location
5AN	Adelaide	5AA	Adelaide	5UV	Adelaide
5CL	Adelaide	5AD	Adelaide		
5CK	Port Pirie	5DN	Adelaide		
5LC	Leigh Creek	5KA	Adelaide		
5LN	Port Lincoln	5AU	Port Augusta		
5MG	Mount Gambier	5MU	Murray Bridge		
5MV	Renmark	5PI	Crystal Brook		
5PA	Naracoorte	5RM	Renmark		
5SY	Streaky Bay	5SE	Mount Gambier		
5WM	Woomera				

### TELEVISION

#### Television Stations

At 30 June 1979 there were six commercial and seven national television stations, two commercial and four national television translator stations in operation in South Australia. A television translator station is a station of low power designed to receive signals of another station and re-transmit them on a different frequency. A translator station does not originate programs.

The following table shows the stations in service and the dates on which they commenced operations.

**Television Stations, 30 June 1979, South Australia**

Call Sign and Channel	Location	Date Service Commenced
NATIONAL STATIONS		
ABS-2	Adelaide	March 1960
ABNS-1	Port Pirie	April 1965
ABGS-1	Mount Gambier	December 1965
ABRS-3	Loxton	January 1971
ABCS-7	Ceduna	July 1973
ABWS-7	Woomera	November 1973
ABLCS-9	Leigh Creek	April 1977
COMMERCIAL STATIONS		
NWS-9	Adelaide	September 1959
ADS-7	Adelaide	October 1959
SAS-10	Adelaide	July 1965
SES-8	Mount Gambier	March 1966
GTS-4	Port Pirie	March 1968
RTS-5A	Renmark-Loxton	November 1976

Commercial television stations are operated by companies under licences granted by the Australian Broadcasting Tribunal with technical operating conditions determined by the Minister for Post and Telecommunications. The stations obtain income from the televising of advertisements. The fee for a licence for a commercial television station is \$200 plus an amount based on the gross earnings from advertising receipts during the preceding financial year, assessed on a sliding scale varying from 1 per cent for amounts up to \$0.5m to 6 per cent on amounts exceeding \$5.0m.

#### Colour Television

From 19 October 1974 to 28 February 1975 a restricted number of hours per week of colour television were transmitted for test purposes and on 1 March 1975 colour television was introduced in South Australia and is now used for most programs.

#### Television programs

On commercial channels there is a considerable emphasis on drama and light entertainment, whereas the Australian Broadcasting Commission devotes more time to programs of an informative and educational nature. Statistics of Adelaide television programs are shown in the following table.

**Composition of Television Programs, All Adelaide Stations, 1978<sup>(a)</sup>**

Category	Commercial	National
	Per cent	
Television drama .....	26.3	17.1
Cinema movies .....	15.7	2.6
Cartoons .....	5.7	1.5
Light entertainment .....	12.5	7.1
Sport .....	7.0	14.4
News .....	2.8	6.3
Children's .....	7.4	17.0
Family .....	2.3	0.8
Information and documentary .....	1.9	9.7
Current affairs .....	1.3	7.5
Politics .....	—	—
Religion .....	1.4	1.3
The arts .....	0.1	2.9
Education .....	0.2	11.8
Advertisements .....	15.4	—
Total .....	100.0	100.0

(a) Percentage of transmission time (6 a.m. to 12 midnight) in each category.

#### SPECIAL BROADCASTING SERVICE

The *Broadcasting and Television Amendment Act 1977*, which was passed by Federal Parliament on 9 November 1977, makes provision for the establishment of the Special Broadcasting Service (SBS). The role of the new authority will be to produce special broadcasting programs which would not be appropriate for the Australian Broadcasting Commission or other established broadcasters to undertake. Initially the SBS will be responsible for the ethnic broadcasting service through stations 2EA Sydney and 3EA Melbourne. It is envisaged that the SBS may, at a later stage, assume responsibility for other special broadcasting and television services in Australia. New services by the SBS, however, may only be undertaken after Parliamentary approval is given and the necessary regulations promulgated. The SBS will be empowered to fund its operations by the

broadcasting of sponsored programs, by charging for the provision of services and facilities, and by the sale of programs and rights or interests in programs. These avenues of funding are in addition to moneys appropriated annually from the Parliament to the SBS. The SBS will not, however, derive revenue by means of normal commercial advertising.

### PUBLIC BROADCASTING

The Broadcasting and Television Act makes provision for the grant of licences for the operation of a broadcasting or a television station for special purposes. No public television stations are in operation. Fifteen public broadcasting stations had previously been licensed on an experimental basis under the provisions of the Wireless Telegraphy Act.

Applications for licences under the *Broadcasting and Television Act* 1942 for a total of twenty-six stations, including those operating on an experimental basis were the subject of public inquiries by the Australian Broadcasting Tribunal during 1978. Of the twenty-four licences offered and accepted in Australia, eighteen stations were in operation at 30 June 1979. Licences were offered and accepted for three stations to serve the city of Adelaide, one of which operated by the University of Adelaide, was in operation at 30 June 1979. A special music station and an ethnic broadcasting station will be in operation shortly.

Public broadcasting stations are operated by non-profit making groups to provide special broadcasting services to the community.

### FILMS

#### South Australian Film Corporation

The South Australian Film Corporation is constituted under the South Australian Film Corporation Act, 1972-1979. The Corporation has the sole right to produce, or arrange for the production of, films for or on behalf of the State Government.

The Corporation also may undertake film production on its own behalf or for other organisations. It produces its own feature films for cinema and television release and also enters into co-production and investment arrangements with other producers. Productions in which it has been involved so far include *Sunday Too Far Away*, *Picnic at Hanging Rock*, *Storm Boy*, *The Last Wave*, *Blue Fin* and *Breaker Morant*, which have received Australian and overseas acclaim from audiences and critics.

The Corporation also produces many short films for commercial sponsors, in addition to a wide range of films for State Government departments and instrumentalities. Prints of these films are sold extensively throughout Australia and abroad. Several have won Australian and international awards for excellence.

Other functions of the Corporation include the distribution and exhibition of films, the provision of library and other services relating to films and research into the effectiveness of films generally.

The Corporation encourages feature film and television production by providing studio and sound mixing facilities for rental. Liaison services for producers based outside South Australia are also available.

### THE PRESS

The State's first newspaper, *The South Australian Gazette & Colonial Register*, was first printed in London in 1836, six months before colonisation. The second issue of this paper, which served both as the official government publication and as an unofficial

reporter of the news, was produced in Adelaide twelve months later. *The South Australian Gazette* (renamed *The South Australian Government Gazette* in 1840) emerged as a separate organ in 1839 and the newspaper continued as *The Register*. In 1850 *The Register* became the first continuous daily paper.

In the next twenty years several more daily newspapers were introduced, and for many years there were two morning and two evening papers daily. However, since the mid-1920s the present system of three major newspapers—one morning daily, one evening daily and one weekend publication—has emerged.

*The Advertiser*, published each morning except Sunday, was first issued in 1858 as *The South Australian Advertiser* and absorbed *The Register* in 1931. It is distributed throughout the State, with about 30 per cent of its circulation in country districts.

*The News*, published each evening from Monday to Friday, was introduced in 1923 replacing two evening newspapers, *The Express & Telegraph* and *The Journal*, which traced back their origins to the 1860s. Almost 80 per cent of sales of *The News* are in Adelaide and suburbs.

*The Sunday Mail*, printed on Saturday evenings and distributed mainly on Sunday mornings, first appeared under this name in 1955 following a merger between *The Mail*, first printed in 1912, and the *Sunday Advertiser*, which was introduced in 1953. About 25 per cent of sales of the *Sunday Mail* are in country districts.

*The Stock Journal*, previously the *Adelaide Stock and Station Journal*, was established in 1904. It is published weekly and provides up-to-date information on stock and wool markets and the technical aspects of farming and property management.

In addition to these major State-wide newspapers, a strong provincial press has been built up. There are at present thirty country newspapers operating in the State with a combined circulation of over 106 000. Most of these are published weekly, although two appear bi-weekly and three tri-weekly. Of those still existing, *The Border Watch* (Mount Gambier) in 1861 and *The Bunyip* (Gawler) in 1863 were first to appear. Earlier publications are, however recorded; *The Port Lincoln Herald*, for example, was printed in the early 1840s. There are also district papers containing items of local interest circulated in a number of suburbs of Adelaide.

## PARKS AND GARDENS

### Botanic Gardens

The Adelaide Botanic Garden, occupying about 20 hectares east of the Royal Adelaide Hospital, was established in 1855 and was opened to the public in 1857. Botanic Park, an area of about 30 hectares north of the Garden was acquired in 1874 and has now been developed as an arboretum.

Since 1860 powers of management have been vested in the Board of the Botanic Gardens of eight members who serve for a period of four years but who may be re-elected for further terms.

The Garden contains an extensive collection of about 6 000 species of plants. Important features are the collections of native plants from dryland regions, cacti and succulents, the class ground, glass house displays and the Wisteria arbor. The Museum of Economic Botany, opened in 1879, houses a comprehensive carpological collection, displays of plant products and educational displays.

In 1954 the State Herbarium was re-established within the Botanic Garden and a new herbarium building was completed and occupied in 1965. At present it contains about 350 000 specimens.

State-wide advisory services are available on all matters relating to ornamental horticulture. Two seconded teachers from the Education Department handle all

enquiries for pre-primary to tertiary curricular matters and all visits by school children to the Garden.

Experimental tree plantations have been established at Giles Corner, Kulpara, Lameroo, Stansbury and Meningie to test hardiness of ornamental woody plants under natural rainfall.

In the mid-1960s the Wittunga Garden at Blackwood was donated by the Ashby Family to the Botanic Garden. This comprises approximately 15 hectares and has Australian and South African plants and was opened officially in mid-September 1975.

Mount Lofty Botanic Garden of approximately 95 hectares was established in 1952 and was opened to the public on 5 November 1977.

### Zoological Gardens

The Royal Zoological Society of South Australia was founded in 1878, and in 1883 approximately 8 hectares of Botanic Park were granted to the Society for the establishment of the Zoological Gardens. At the same time arrangements were made for the various exotic and Australian animals and birds previously housed in the Botanic Garden to be transferred to the Zoological Gardens.

The Zoological Gardens contains an excellent collection of mammals, birds and reptiles. Particular emphasis is given to Australian fauna and especially to native Australian birds. During 1978-79, 144 species and varieties of mammals, including a large collection of marsupials, and more than 240 different species of Australian and foreign birds were exhibited.

The many mammals, reptiles and birds are attractively displayed in cages and enclosures; the enclosures for some animals are moated yards freely open to public view. Two walk-through aviaries, a Children's Zoo, where the animals can be handled and fed, and a nocturnal house for the display of animals which are more active during the night than the day, are features of the Gardens.

The revenue necessary for maintaining and developing the Gardens is obtained through an annual State Government grant, from gate receipts and sundry sources.

During 1978-79 about 368 500 persons visited the Zoological Gardens.

### National Parks and Wildlife Service

The National Parks and Wildlife Act, 1972-1978, repealed several Acts and amalgamated the previous functions of, and areas controlled by, the National Parks Commission, National Pleasure Resorts, the Fauna and Flora Board and the fauna section of the Fisheries and Fauna Conservation Department to form the National Parks and Wildlife Service. The Service is a division of the Department for the Environment and its purpose is to establish and manage reserves for public benefit and enjoyment, and to conserve wildlife.

The Act also provides for the protection of native fauna and some species of native flora. The reserves are classified into the following types:

1. National Parks (parks of national significance);
2. Conservation Parks (primarily for conservation);
3. Recreation Parks (to allow for recreation without undue danger to natural areas);
4. Game Reserves (to permit management of wildlife).

At 30 June 1979 the reserves comprised 199 areas throughout the State and consisted of nine National Parks, 167 Conservation Parks, fifteen Recreation Parks and eight Game Reserves. The total area was almost 4.2 million hectares, or 4.2 per cent of the State.

Areas under Service control ranged from 0.4 hectares (Lipson Island Conservation Park) to 2 132 600 hectares (an unnamed conservation park in the north-west of the State).

The National Parks and Wildlife Service issues permits to keep and sell protected animals and is responsible for the issue of hunting permits in South Australia.

A description of some of the parks, recreation reserves and places of historical or scenic interest was included on page 217 of the *South Australian Year Book* 1972. Flora and fauna are discussed in Part 1.4 Natural Environment.

#### **Municipal Parks and Gardens**

The City of Adelaide is surrounded by 688 hectares of parklands, considerable areas of which are devoted to gardens (136 hectares), golf courses (100 hectares) and other recreational areas. The form of development and flexibility of areas permits varied usage by the public including equestrian activities, swimming, boating, ball games, picnicking, fetes, Christmas parties, art displays and pop concerts. Planting during the year 1978-79 included 928 trees and 1 271 shrubs.

Most suburban and country local government authorities maintain parks and gardens within their areas.

### **RECREATION AND SPORT**

#### **Division of Recreation and Sport**

The Division of Recreation and Sport is part of the Department of Transport.

On 28 June 1976 the functions of the National Fitness Council of SA were amalgamated with those of the Division of Recreation and Sport.

The Recreation and Sport Division is involved in:

- capital assistance program for community recreation facilities;
- equipment grants for recreational and sporting equipment;
- advisory services for planning of recreation facilities;
- sports coaching scheme, providing grants for coaching and training;
- financial assistance towards travel to National sporting events;
- grants for innovative programs involving adults;
- implementation of the 'Life Be In It' Campaign;
- administration of residential recreation centres at Mylor and Parnanga and a Conference Centre at 'Graham's Castle', Goolwa;
- club administration courses, vacation recreation programs;
- recreation for special groups, including women, the handicapped and the elderly;
- maintenance and administration of walking tracks;
- research and planning for recreation and sport;
- administering the Regulations under the Lottery and Gaming Act, 1936-1978, pertaining to the licensing of small lotteries in the State;
- administering the provisions of the Racing Act, 1976-1978, and Regulations thereto.

#### **Sports Administration Centre**

In May 1978 the State Government established a Sports Administration Centre at Wayville. The Centre provides individual/shared office accommodation for sporting associations, general office services, printing and duplication service and telephone facilities. The cost of such accommodation is defrayed by a rental contribution from organisations wishing to use the accommodation.

The Centre has been designed to help alleviate the problems and expenses involved

with the administration of sporting organisations. It is intended to function as a house of business and is geared to encourage associations to conduct their management in a more proficient and informative manner. As a collective central point, it allows a more effective communication level to be established with Government authorities and private business groups interested in the promotion of sport.

A restriction of 5 days per week per sport has been imposed and therefore priority for accommodation is given to the recognised State Associations. If the controlling body does not require the services of the Centre, then affiliated groups, with the approval of the State body, may avail themselves of the services.

### SPORTING FACILITIES

In terms of attendance the most popular spectator sport is Australian Rules football; during the 1979 season the average attendance at the 110 minor round matches was 7 774 while the average at the six final matches was 30 790.

In addition, nine Escort Cup night matches were played in South Australia. Total attendance was 36 846, an average of 4 094 a match. For the first time since 1975 an interstate game was played against Victoria, drawing 32 054 spectators.

From 1974 the South Australian National Football League Inc. has used its headquarters ground, Football Park at West Lakes, for major games with the Adelaide Oval as a support oval for matches when Football Park is unavailable or when other matches have been programmed there. There was a record attendance of 66 897 at the Grand Final on 25 September 1976.

Adelaide Oval, occupying approximately 6 hectares of the north parklands, has been used for major cricket and Australian Rules football matches. The record attendances have been 62 543 on 2 October 1965 for Australian Rules football and 50 962 for Test cricket on 14 January 1933. In addition there are first-class suburban ovals at which major sports are played.

The Olympic Sports Field which features a synthetic 'tartan' track is the headquarters of the South Australian Amateur Athletic Association which is affiliated with the Amateur Athletic Union of Australia. Each Saturday from October to March inter-club contests are held at this arena with an approximate annual attendance of 100 000 competitors and spectators. The Olympic Sports Field is also used by the South Australian Women's Amateur Athletic Association which conducts competitions on Saturday afternoons. In addition regular international twilight meets are scheduled throughout the year.

The Apollo Stadium at Richmond is a multi-purpose air-conditioned building with seating for 4 390 spectators at which a weekly basketball competition is conducted. It is situated on a 2-hectare site and is the headquarters of the South Australian Amateur Basketball Association Inc. The stadium is also used by visiting entertainers. Other basketball stadiums are at Forestville, Bowden, Marion, Hillcrest, Colonel Light Gardens and Morphett Vale. Many school gymnasiums have basketball facilities and this sport is played in the open at various centres.

A number of indoor multi-purpose centres exist at Angle Park (The Parks centre), Blackwood, Campbelltown, Elizabeth, Ingle Farm, Marion, Noarlunga, Woodville and Salisbury and in country areas at the following locations: Kadina, Loxton, Mannum, Mount Barker, Naracoorte, Peterborough, Renmark, Tanunda and Waikerie. Another is currently under development at Clare.

The parklands of the City of Adelaide are used extensively for sporting purposes and during 1978-79, 417 sports permits were issued catering for eighteen different sports.

Sports grounds are distributed throughout suburban Adelaide, at approximately two to

three kilometre intervals, and throughout country areas. In addition sports areas are available at most government and non-government schools.

### Race Courses

There are four registered metropolitan courses; Morphettville, Cheltenham, Victoria Park (occupying approximately 23 hectares of the east parklands) and Oakbank. In addition there were, at 31 December 1979, thirty-five registered racing clubs and twenty-eight registered country courses. Picnic race meetings are held at a number of outlying centres.

### Trotting Tracks

Metropolitan trotting in South Australia is conducted at Globe Derby Park, Bolivar, a modern and well-appointed track. There are twelve other courses in use in the State and seven of these (Gawler, Kadina, Kapunda, Mount Gambier, Murray Bridge, Port Augusta and Port Pirie) have facilities for the conduct of night trotting.

### Dog Racing

Greyhound racing (with betting) was introduced into South Australia in May 1971 with meetings at Whyalla and Strathalbyn. Other tracks have been established at Angle Park, Barmera, Gawler and Port Pirie since that date. Meetings are held three to four times a week. Average attendance at Angle Park, the city track, is approximately 3 000. At present about 5 000 people own or train greyhounds in South Australia. The estimated greyhound population is 8 000 dogs.

### Golf Courses

At 31 December 1979 there were eight suburban public courses, five 18-hole courses including one at National Park, Belair, and four par-3 links. There were also fourteen private courses operating within suburban Adelaide. In addition there are courses at many country centres. Five new nine-hole golf courses have been built, including Regency Park, Marino and North Haven.

### Motor Racing

Adelaide International Raceway at Virginia was opened on 2 January 1972. It occupies an area of 65 hectares and contains two racing circuits of 2 and 3 kilometres respectively, and a drag racing strip. There is provision for 20 000 spectators and approximately fifty meetings are held each year.

A rallycross track was commissioned at Tailem Bend Raceway on 17 April 1977. The track has been leased by the Tailem Bend Racing Club to the South Australian Motor Racing Club which conducts rallycross meetings on an average of once every six weeks. The 1.2 kilometre track, which is a combination of bitumen and loose dirt, was laid in 1976 by the District Council of Meningie.

### Tennis Courts

The South Australian Lawn Tennis Club's courts (thirty-five grass and eight hard) at Memorial Drive, North Adelaide occupy approximately 4 hectares of the north parklands. The centre court was the venue for Davis Cup matches in 1952, 1956, 1963, 1968, 1975 and 1978. At 31 December 1979 the parklands also contained approximately 210 other tennis courts. Courts associated with schools, churches and private clubs exist throughout the State.

### Lawn Bowling Clubs

At 30 June 1979 there were 238 bowling clubs registered with the Royal South Australian Bowling Association—sixty-seven in and near Adelaide and 171 in country areas, including four at Broken Hill, New South Wales. The size of clubs varied from thirty-five rinks at Bordertown to as few as three rinks, with the two largest suburban clubs being Holdfast Bay and Lockleys, each with thirty-two rinks. There are also 231 bowling clubs registered with the South Australian Women's Bowling Association, sixty-one in the metropolitan area (including seven clubs exclusively for women) and 170 in the country. The total membership exceeds 17 000 men and 10 000 women.

### Swimming Facilities

At 31 December 1978 there were eighty-one public swimming pools in South Australia, of which fifty-seven were in country centres. Of these only eight country and two metropolitan pools had been in use before 1950, recent activity having been stimulated by a State Government subsidy on pool construction. Of the eighty-one pools, seventy-four had treated water, the remainder were in lakes, dams, rivers or the sea, or utilised sea water. While mainly used for recreational and instructional purposes, the facilities provide a base for fifty-four swimming clubs providing instruction and competition in swimming, diving and water polo. These clubs have a total membership of 6 203.

Swimming pools are provided at sixty-eight government schools, twenty-eight of these being in country areas. Swimming facilities are also available at a number of non-government schools. The Education Department encourages school committees to build swimming pools by granting subsidies for their construction.

The Adelaide Swimming Centre in the north parklands, opened on 20 December 1969, is a complex of four heated pools, including a 50-metre eight-lane pool, a diving/water polo pool, both of which comply fully with international competition requirements, a 20 metre by 20 metre learner's pool and a toddler's pool. The Centre is contained in a 2-hectare grassed area with spectator accommodation for 2 000 people forming an amphitheatre arrangement surrounding the competitive pools.

A new swimming complex was opened at Marion on 24 January 1976. The complex comprises 50-metre, learner's and wader's pools with associated facilities and was constructed at a cost of approximately \$900 000 by the Marion City Council, with financial assistance from the Commonwealth and State Governments.

An indoor 25-metre heated public swimming pool has been completed for the Parks Community Centre, the third in the State; the other two being at Mount Gambier and Whyalla.

The nature of Adelaide's foreshore and that of many country beaches, combined with the prevailing climate, provides ideal conditions for open sea summer bathing.

## LOTTERIES AND BETTING

### LOTTERIES

The State Lotteries Act, 1966-1978 provides for the promotion and control of lotteries by the Government of the State. In November 1966 a Lotteries Commission, consisting of a chairman and two other members, was appointed to administer the Act which came into operation on 8 December 1966 and the first draw was made in May 1967.

In accordance with Section 16 of the Act all moneys received by the Commission are paid into a Lotteries Fund from which moneys are made available to meet the expenses of the Commission and to pay prizes. The balance of the Lotteries Fund, which represents the surplus of income over expenditure and prize money not claimed for over six months, is transferred to the Hospitals Fund.

Up to 31 December 1979, \$183 936 587 was received from the sale of tickets, including X Lotto, and Instant Money Game, of which \$112 115 461 was distributed in prize money, and approximately \$56.9 million had been transferred to the Hospitals Fund.

Originally only one lottery, a 50 cent series, was conducted but in July 1967 a Jackpot series with tickets at \$1 each, was introduced. In addition special lotteries have been conducted with tickets sold at \$2, \$3, \$4, \$5, \$10 or \$20 each. The last of the 50 cent lotteries was drawn on 2 July 1974 and on 3 July 1974 a 60 cent lottery was introduced. However, its popularity gradually declined and the 60 cent lottery was discontinued on 6 August 1976.

In April 1973, a new type of lottery called 'X Lotto' (Cross Lotto) was introduced. In October 1975, the percentage of prize money was increased from 60 per cent to 61 per cent. For the year ending 31 December 1979, \$16 087 915 was invested.

On 4 December 1978 the Commission introduced yet another type of lottery called 'Instant Money Game'. As its name indicates, the subscriber knows immediately whether he has won a prize. This lottery originated in America in 1974 and has spread to England, Europe, Africa. The instant prizes in this lottery range from \$2 to \$10 000, amounts of \$2 and \$5 are paid immediately at the point of sale; higher prizes are paid by cheque from Head Office immediately after verification on presentation of the ticket. Tickets are in Lots of 500 000 with a face value of \$1 each, 60 per cent of which is allocated to prize money. Sales for the year ending 31 December 1979 were \$27 million.

At 31 December 1979 there were 227 Lotteries Commission Agents appointed in South Australia. Of these, 150 were in the Adelaide and suburban areas; fifty-six in country areas and twenty-one were subscriber (non-ticket selling) agents.

## BETTING

Legalised betting in South Australia is restricted to horse racing, trotting, dog racing and coursing. Since 1 January 1977 it has been governed by the provisions of the Racing Act, 1976-1978.

The Act makes provision for betting with the totalisator and with bookmakers at horse race, trotting and dog race meetings. The totalisator cannot be used at coursing meetings but bookmakers may operate at these meetings.

Before December 1933 legalised betting was restricted to totalisator betting at registered race meetings. From 1933 to 1967 it was limited to 'on-course' totalisator and to betting with bookmakers who were licensed to bet on courses where meetings were held, and also (from January 1934 to February 1942) with bookmakers who were licensed to bet 'off-course' in specially registered premises.

As a war-time measure racing and betting in South Australia were banned from March 1942 until October 1943. Off-course betting facilities were not re-established until 1946, when they were restricted to country areas. Port Pirie is the only town where bookmakers now operate in registered premises.

Details of on-course betting and betting in registered premises are given in the following table for the years 1976-77 to 1978-79.

**Betting: Amounts Invested with Bookmakers and On-Course Totalisators and Distribution of Commissions, Taxes and Fractions, South Australia**

Particulars	1976-77	1977-78	1978-79
Amount invested:	\$'000		
Totalisator;			
Horse racing .....	12 792	13 956	14 581
Trotting .....	3 513	3 712	3 264
Dogs .....	3 128	3 057	2 866
Total .....	19 433	20 725	20 711
Bookmakers;			
Horse racing .....	115 767	124 447	123 551
Trotting .....	32 360	33 919	28 812
Dog racing and coursing .....	26 264	26 197	27 300
Total .....	174 391	184 563	179 663
<b>Total amount invested .....</b>	<b>193 824</b>	<b>205 288</b>	<b>200 374</b>
Distribution of commissions, taxes and fractions derived from betting transactions:	\$'000		
State Government;			
Bookmakers,			
Commission on bets .....	1 925	2 033	2 002
Duty on betting tickets .....	146	147	137
Unclaimed bets .....	151	172	184
Totalisator,			
Tax and licences .....	(a) 963	1 022	1 021
Unclaimed dividends .....	(b) 80	1	—
Total paid to Consolidated Revenue	3 265	3 375	3 344
Clubs;			
Bookmakers,			
Commission on bets .....	1 874	1 979	1 925
Totalisator,			
Commission on takings .....	1 883	2 071	2 077
Fractions .....	9	127	140
Total payable to clubs .....	3 766	4 177	4 142
Racecourses Development Board;			
Commission on Totalisator takings .....	39	44	47
Totalisator fractions .....	170	60	41
Total .....	209	104	88
Hospitals Fund;			
Totalisator unclaimed dividends .....	(b) 17	95	94
<b>Total distribution .....</b>	<b>7 257</b>	<b>7 751</b>	<b>7 668</b>

(a) No licence fees payable from 1 January 1977.

(b) Payable into Hospitals Fund from 1 January 1977.

In October 1966 provision was made for the setting up of the Totalizator Agency system of 'off-course' betting, and agencies have since been established in the metropolitan area and at numerous country towns. A Board consisting of a Chairman and seven other members representative of racing and trotting interests was appointed to administer the new system and the Totalizator Agency Board (TAB) Headquarters was established in Adelaide during December 1966. The Board was enlarged during 1970-71 to include a representative of the greyhound racing interests. The Board was changed in 1976 to comprise an independent Government appointed Chairman and Deputy Chairman plus a representative from the controlling body of each of the three codes of galloping, trotting and greyhounds. The TAB first operated on 29 March 1967 on a country race meeting while it operated for the first time on a metropolitan meeting on 1 April 1967.

Thirteen agencies were open on the first day of TAB operations. At 30 June 1979, 166 agencies were operating of which fifty-two were sub-agencies operated in conjunction with other businesses. Further premises in the city, suburbs and country towns are being established progressively to provide a complete coverage of the whole State. In addition, a system of telephone betting is available to persons who have established accounts with the TAB. The installation of mark sense ticket betting terminals in metropolitan agencies commenced on 8 February 1979 and at 30 June 1979, 76 metropolitan agencies were on-line. At 30 June 1979 the Board employed 202 permanent and 574 part-time staff.

For the year ended 30 June 1979 off-course investments totalled \$97 030 079 of which approximately 82 per cent was payable as dividends. The following amounts became payable to the South Australian Government (to be paid into the Hospitals Fund at the State Treasury) from the operations of the Board during that year:

	\$
Stamp duty .....	4 851 503
Fractions .....	770 560
Unclaimed dividends .....	435 097
Commission on NSW (Broken Hill) investments .....	3 912
	<hr/>
	\$6 061 072

In addition, for the year ended 30 June 1979, an amount of \$701 660 became available for distribution to racing, trotting and greyhound clubs under a scheme of distribution prepared by the Controlling Bodies Board and approved by the Minister for Recreation and Sport. Since commencing operations in 1967 the Board has distributed a total of \$17 649 597 to participating clubs while in the same period, the South Australian Government has received \$43 094 859.

#### Racecourses Development Board

The Racecourses Development Board, established under the Lottery and Gaming Act, 1936-1978 and continued under the Racing Act, 1976, administers the Horse Racing Grounds Development Fund, the Trotting Grounds Development Fund and the Dog Racing Grounds Development Fund. These funds are financed by a proportion of investments on totalisators conducted by racing clubs or the Totalizator Agency Board and are to be applied by way of grants or loans to racing clubs for providing, erecting, improving or repairing public facilities. The Board is empowered also to borrow funds for these purposes.

## 6.5 HEALTH

### HISTORICAL

The first hospital in South Australia was built in 1837. It was a small thatched hut situated on North Terrace and measured 6 metres by 4 metres. The foundation stone of the first Adelaide Hospital was laid in 1840. This building, which was demolished in 1938, contained two 12-bed wards and four smaller rooms. The first buildings of the present Royal Adelaide Hospital were erected in 1856-57. Hospitals in the country were established at Mount Gambier in 1869, Wallaroo and Port Lincoln in 1870, Port Augusta in 1875, and Port Pirie in 1890. The Port Adelaide Casualty Hospital was erected in 1882.

The State's first mental hospital, now demolished, was situated in Botanic Park. The Parkside Psychiatric Hospital (now Glenside Hospital) commenced operation in 1870 under the control of the Colonial Surgeon. The Enfield Receiving House and the Northfield Mental Hospital (now Hillcrest Hospital) were established in 1922 and 1929 respectively.

The first Health Act in South Australia was passed in 1873. This Act, which was modelled on earlier English legislation, established a Central Board of Health, and a number of town councils were constituted as local boards. The present Health Act dates from 1935. Administration continued under the authority of the Central Board of Health until 1949 when a Department of Public Health was formed to co-ordinate the work of the board and other health activities.

The major State Government authorities responsible for health services in South Australia have been traditionally the Hospitals Department and the Department of Public Health. Each Department, administered separately, had a permanent head who reported to the Minister of Health.

The Hospitals Department was responsible for the management and co-ordination of Government Hospitals in South Australia, both general and psychiatric.

The South Australian Health Commission was established on 1 July 1978 to ensure better rationalisation and co-ordination of health services in this State. A step in this direction was made in January 1978 when the Department of Public Health amalgamated with the Hospitals Department and the South Australian Health Commission assumed the functions previously undertaken by the Department of Public Health.

The Health Commission embraces the activities of the Central Board of Health, the Occupational and Environmental Health Branch, the School Health Branch (including the Deafness Guidance Clinic), Dental Health Services, the Communicable Disease Control Unit, the Food and Drugs Advisory Committee, the Radiological Advisory Committee, the Geriatrician's Branch, the Clean Air Committee, and also the public health aspects of the control of tuberculosis, including the Chest Clinic and the State X-ray health surveys. The Commission is responsible also for health education, including the drug education program sponsored by the Commonwealth Government, and for Aboriginal health in South Australia.

The Central Board of Health administers the Health, Food and Drugs, Narcotic and Psychotropic, Noxious Trades and Bakehouses Registration Acts. The Board also has responsibilities under the Local Government Act and the Cremation Act.

The Health Act and the Food and Drugs Act constitute every municipal or district council a local board of health or local authority for its area, except that in the metropolitan area, the Metropolitan County Board (representing twenty metropolitan corporations) is the local authority under the Food and Drugs Act. The Central Board of Health acts as a supervisory body over all the 131 local boards under the Health Act, the Food and Drugs Act and the Bakehouse Registration Act. It has concurrent jurisdiction

with local boards. Outside the boundaries of local boards the Central Board is the administering authority.

The Commonwealth Government through the Departments of Health and Social Security is responsible for the administration of national health services in co-operation with State health authorities and voluntary organisations. Under the *Quarantine Act* 1908 the Department of Health is responsible for the various aspects of human, animal and plant quarantine.

The South Australian Branch of the Department of Veterans' Affairs administers the medical services provided for ex-service personnel whose disabilities are accepted as being attributable to war service.

### GENERAL HOSPITAL SERVICES

The control of hospitals in South Australia is vested in several authorities including the South Australian Health Commission, the Department of Veterans' Affairs, religious and charitable organisations, local community committees and private owners.

### RECOGNISED HOSPITALS

Recognised hospitals (formerly public hospitals) are those which have been approved under the Hospital Agreement between the State Government and the Commonwealth. This agreement was subsequently renegotiated, with some amendments, effective from 1 October 1976. They are deficit financed by the State Government; the Commonwealth has agreed to meet up to 50 per cent of net operating costs in accordance with an agreed budget.

The former Government teaching hospitals, Royal Adelaide Hospital, the Queen Elizabeth Hospital and Modbury Hospital, and the former country Government recognised hospitals at Port Pirie, Mount Gambier, Port Lincoln, Port Augusta and Whyalla were incorporated under the South Australian Health Commission Act at 30 June 1979. Each has its own board of management.

In addition there are sixty-five recognised hospitals in country areas and six (including Adelaide Children's Hospital and Queen Victoria Hospital) in the metropolitan area, conducted by local boards of management, which are deficit financed by the State Government and come under the general supervision of the South Australian Health Commission.

**Recognised Hospitals: South Australia, 1978-79**

Particulars	Royal Adelaide Hospital	Queen Elizabeth Hospital	Adelaide Children's Hospital	Other Recognised Hospitals	Total
<b>Staff (at end of year):</b>					
Medical;					
Salaried .....	263	170	85	249	767
Sessional (a) .....	55	27	23	33	138
Nursing .....	1 910	1 156	559	4 183	7 808
Others .....	1 890	1 148	750	3 295	7 083
<b>In-patients:</b>					
Admitted and re-admitted .....	37 023	30 609	17 128	131 555	216 315
Average daily number resident	882	511	201	2 818	4 412

(a) Includes visiting specialists paid on a sessional basis and honorary consultants, but not those paid on a modified fee for service basis.

## Recognised Hospitals, South Australia

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
Hospitals .....	71	73	81	81	81
Staff (at end of year):					
Medical:					
Salaried .....	568	664	686	775	767
Sessional (a) .....	607	415	389	152	138
Nursing .....	7 600	7 780	8 316	8 235	7 808
Other .....	6 505	7 298	7 530	7 176	7 083
Total .....	15 280	16 157	16 921	16 338	15 796
Patients:					
Admitted and re-admitted .....	168 832	179 733	190 806	202 802	216 315
Average daily number resident ....	4 221	4 207	4 291	4 364	4 412
Operating receipts:					\$'000
State Government aid .....	82 194	70 730	87 294	102 450	107 401
Commonwealth Government (b) .....	6 208	70 730	87 294	102 450	107 401
Fees .....	35 724	15 588	27 376	40 351	43 923
Other .....	804	1 230	4 096	2 608	4 765
Total .....	124 930	158 278	206 060	247 859	263 490
Operating payments:					
Salaries and wages .....	90 263	112 039	148 208	180 863	189 656
Other .....	33 467	46 239	57 852	66 996	73 834
Total .....	123 730	158 278	206 060	247 859	263 490
Capital payments:					
Buildings, equipment etc.;					
Government .....	19 741	25 696	30 639	14 349	11 280
Other .....	5 439	5 433	12 337	6 476	8 617
Total .....	25 180	31 129	42 976	20 825	19 897

(a) Includes visiting specialists paid on a sessional basis and honorary consultants, but not those paid on a modified fee for service basis.

(b) Before 1 July 1975, mainly hospital, pharmaceutical and tuberculosis benefits. After that date, 50 per cent of net operating costs.

## Royal Adelaide Hospital

The Royal Adelaide Hospital is a general teaching hospital incorporated under the South Australian Health Commission Act and controlled by a board of management. The Hospital, which incorporates a department of dentistry, is a school of medical and dental clinical teaching, in conjunction with the University of Adelaide.

In addition to the main hospital there are wards at Northfield, a section of which is used to accommodate patients with infectious conditions, and a section of the Morris Hospital, Northfield is occupied by the Spinal Injuries Unit.

At 30 June 1979 there were 1 146 beds at the Hospital, excluding 134 at Northfield classified as nursing home beds.

**Queen Elizabeth Hospital**

The Queen Elizabeth Hospital at Woodville is a general, casualty and maternity hospital incorporated under the South Australian Health Commission Act and controlled by a board of management. It is a teaching hospital affiliated with the University of Adelaide for the clinical teaching of undergraduate medical students. Opened in 1954 as a temporary 55-bed maternity hospital, it has been developed progressively to a major teaching hospital which, at 30 June 1979, had 731 beds available, including ten rehabilitation beds at the Mareeba Rehabilitation Centre, Woodville, which also incorporates a day treatment centre and an extensive domiciliary care service.

**Modbury Hospital**

The Modbury Hospital is a general teaching hospital comprising medical, surgical, maternity and children's wards, and casualty and out-patient services. It is incorporated under the South Australian Health Commission Act and controlled by a board of management.

The hospital complex was designed to provide facilities for 224 beds initially but is planned to extend to 450 beds by 1981. The hospital was officially opened on 16 February 1973, with 134 staffed beds. Since that time additional beds have become available progressively and at 30 June 1979, 220 beds were in use.

**Queen Victoria Hospital**

The Queen Victoria Hospital, founded by public subscription, was opened in 1902. It primarily provides facilities for midwifery, neo-natal paediatrics and gynaecology. It is a university teaching hospital and is controlled by a board of management. Accommodation at 30 June 1979 was 174 beds.

**Adelaide Children's Hospital**

The Adelaide Children's Hospital was founded by public subscription in 1876 and the first buildings were completed in 1879.

The hospital is a general paediatric teaching hospital for children and is a training school for nurses; the Department of Paediatrics of the University of Adelaide is situated at the hospital. It is controlled by a board of management and is a recognised hospital. Accommodation at 30 June 1979 was 352 beds.

**Flinders Medical Centre**

Opened in 1976, the Flinders Medical Centre represents a new concept of a general teaching hospital integrated with a university (Flinders University) for the clinical teaching of undergraduate medical students and for research.

At 30 June 1979, 473 beds were in use; the continuing commissioning of new facilities will increase the total available beds to 550. The centre is controlled by a board of management of eleven members.

**COMMUNITY HEALTH AND DOMICILIARY CARE**

Commencing in late 1971, the Domiciliary Care Program, which is funded jointly by the State and Commonwealth Governments, provides health orientated support services at home so that the recipient is able to continue to live in a domiciliary situation, where frequently, the only previous alternative was institutional care. This concept was greatly expanded in 1973-74 by the addition of the Community Health Program, which provided for a wider range of community health services, not necessarily of a domiciliary nature.

With the introduction of the Hospital Program from 1 July 1975, there has been a

rationalisation of community health services, so that existing hospital facilities may be used, where appropriate, in lieu of the provision of separate facilities or projects.

The whole concept of community health care is one of continuing development as a viable alternative, in appropriate circumstances, to institutional health care.

### REPATRIATION HOSPITALS

The Department of Veterans' Affairs maintains the Repatriation General Hospital at Daw Park. Formerly known as Repatriation General Hospital, Springbank, it was built as a military hospital during the 1939-45 War, and came under the control of the Department in 1947. Medical, surgical and psychiatric in-patient and out-patient treatment is provided for eligible ex-service personnel, eligible dependants, serving members of the forces, and under certain conditions, for non-eligible ex-service personnel and civilians.

In 1974 the Daw Park Private Hospital adjacent to the Repatriation General Hospital was acquired and developed as a Rehabilitation Centre and Day Hospital. Within the Hospital's grounds is the Repatriation Artificial Limb and Appliance Centre which manufactures and supplies artificial limbs and other aids free of charge to all persons who require them, regardless of whether they have a Repatriation entitlement or not. The average daily number of patients in the Repatriation General Hospital during 1978-79 was 225. At June 1979 there were 755 staff and 378 beds.

### PRIVATE HOSPITALS AND NURSING HOMES

Details of all private institutions approved for payment of Commonwealth Government hospital or nursing home benefits are given in the following table.

**Private Hospitals and Nursing Homes, South Australia**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
Number of hospitals .....	48	47	39	37	36
Number of nursing homes .....	124	124	126	127	131
Number of beds at end of year:					
Hospitals .....	2 068	2 041	2 023	1 984	2 002
Nursing homes .....	3 915	4 117	4 318	4 663	4 932

There are several large private hospitals in the metropolitan area including Calvary Hospital, the Memorial Hospital and St Andrew's Presbyterian Hospital, all of which are run by denominational bodies. Another large institution is the Home for Incurables at Fullarton which provides accommodation and nursing attention for persons suffering from chronic disease.

### MENTAL HEALTH SERVICES

The Director of Mental Health Services is responsible for the management of public psychiatric services operating under the Mental Health Act, 1976-1979. A division of the Health Commission, this Service controls four major institutions—Glenside Hospital, Enfield Hospital, Hillcrest Hospital and the Strathmont Centre—and in addition three hostels for accommodating discharged patients, two child guidance clinics, two community mental health centres and the St Corantyn Psychiatric Day Hospital.

In addition to the Enfield Hospital, there are separate 'short-term' receiving units at Glenside and Hillcrest Hospitals where treatment is directed towards early discharge. In general the duration of stay in these units is a few months terminating in either transfer

as a 'long-term' patient or in discharge. A summary of the number of persons receiving Mental Health Services treatment in the years 1972-73 to 1976-77 follows.

#### Government Psychiatric Institutions, South Australia

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
In-patients:					
Admitted and re-admitted .....	3 225	3 309	3 410	3 665	3 489
Discharged .....	3 023	3 230	3 204	3 801	3 499
Deaths during year .....	153	159	158	143	107
Remaining at end of year;					
Males .....	1 148	1 109	1 099	969	956
Females .....	1 060	1 014	975	800	810
Persons .....	2 208	2 123	2 074	1 769	1 766
Out and day-patients:					
Treated during year;					
Males .....	2 245	2 534	2 590	2 891	2 936
Females .....	2 174	2 697	2 623	2 976	2 751
Persons .....	4 419	5 231	5 213	5 867	5 687

The next table shows that for both males and females admitted or re-admitted as in-patients during 1976-77 the most common diagnosis was 'schizophrenia and paranoid states'. Females out-numbered males by about two to one in the diagnosis categories 'depressive psychosis' and 'depressive neurosis', while about five times as many males as females were admitted to the 'alcoholism' category.

#### In-patients Admitted and Re-admitted to Government Psychiatric Institutions South Australia

Diagnosis	1974-75		1975-76		1976-77	
	Males	Females	Males	Females	Males	Females
Senile and pre-senile dementia .....	60	96	63	110	49	84
Alcoholic psychosis .....	55	10	68	13	47	11
Other organic psychoses .....	23	22	38	35	37	57
Schizophrenia and paranoid states .....	455	389	505	425	454	377
Depressive psychosis .....	54	118	83	171	101	223
Other functional psychoses .....	139	210	188	289	212	280
Depressive neurosis .....	100	182	116	248	95	188
Other neuroses and psychosomatic disorders .....	58	111	47	61	52	75
Alcoholism .....	371	90	303	66	269	47
Drug addiction .....	43	32	35	27	31	18
Other personality disorders .....	185	142	174	143	127	118
Transient situational disturbances and behaviour disorders of childhood .....	33	34	35	40	31	41
Non-psychotic mental disorders associated with physical condition .....	28	8	18	17	10	6
Mental retardation .....	184	146	161	149	230	165
Non-psychiatric diagnosis .....	18	14	23	14	36	18
Total .....	1 806	1 604	1 857	1 808	1 781	1 708

In-patients discharged during 1976-77 are shown in the following table in relation to the period hospitalised and the condition treated.

**In-Patients Discharged from Government Psychiatric Institutions  
Diagnosis and Period Resident, South Australia, 1976-77**

Diagnosis	Period Resident						Total Discharges
	Under 2 weeks	2 weeks and under 1 month	1 month and under 2 months	2 months and under 6 months	6 months and over		
MALES							
Senile and pre-senile dementia .....	8	13	7	7	11	46	
Alcoholic psychosis .....	10	11	16	8	8	53	
Other organic psychoses .....	10	5	5	6	11	37	
Schizophrenia and paranoid states .....	97	112	103	113	43	468	
Depressive psychosis .....	17	26	25	23	4	95	
Other functional psychoses .....	57	52	52	37	12	210	
Depressive neurosis .....	42	22	15	7	2	88	
Other neuroses and psychosomatic disorders .....	25	9	13	6	1	54	
Alcoholism .....	53	56	104	49	9	271	
Drug addiction .....	16	9	3	2	1	31	
Other personality disorders .....	59	32	24	15	10	140	
Transient situational disturbances and behaviour disorders of childhood .....	15	4	8	4	2	33	
Non-psychotic mental disorders associated with physical condition .....	3	2	—	3	—	8	
Mental retardation .....	78	89	31	3	22	223	
Non-psychiatric diagnosis .....	18	11	4	5	2	40	
Total .....	508	453	410	288	138	1 797	
FEMALES							
Senile and pre-senile dementia .....	17	11	29	12	18	87	
Alcoholic psychosis .....	2	4	—	1	4	11	
Other organic psychoses .....	12	16	11	7	9	55	
Schizophrenia and paranoid states .....	69	89	119	76	41	394	
Depressive psychosis .....	40	57	71	36	12	216	
Other functional psychoses .....	69	77	77	46	7	276	
Depressive neurosis .....	67	44	32	27	8	178	
Other neuroses and psychosomatic disorders .....	27	20	10	8	6	71	
Alcoholism .....	16	11	14	8	1	50	
Drug addiction .....	9	4	2	5	—	20	
Other personality disorders .....	53	28	10	17	8	116	
Transient situational disturbances and behaviour disorders of childhood .....	28	8	3	—	2	41	
Non-psychotic mental disorders associated with physical condition .....	4	—	1	2	—	7	
Mental retardation .....	55	70	20	4	13	162	
Non-psychiatric diagnosis .....	5	3	7	3	—	18	
Total .....	473	442	406	252	129	1 702	

The following table shows the number of patients treated in 1976-77 classified by the diagnosis and number of attendances.

**Out-patients and Day-patients Treated in Government Psychiatric Institutions  
Diagnosis and Number of Attendances, South Australia, 1976-77**

Diagnosis	Number of Patients who Attended					Total Patients Treated
	1-4 Times	5-9 Times	10-15 Times	16-22 Times	23 or more Times	
MALES						
Senile and pre-senile dementia .....	2	1	—	—	4	7
Alcoholic psychosis .....	2	2	2	—	2	8
Other organic psychoses .....	4	1	—	1	2	8
Schizophrenia and paranoid states .....	209	120	56	37	67	489
Depressive psychosis .....	36	37	7	4	10	94
Other functional psychoses .....	64	46	35	6	10	161
Depressive neurosis .....	152	54	24	9	18	257
Other neuroses and psychosomatic disorders .....	160	76	19	11	15	281

**Out-patients and Day-patients Treated in Government Psychiatric Institutions  
Diagnosis and Number of Attendances, South Australia, 1976-77 (continued)**

Diagnosis	Number of Patients who Attended					Total Patients Treated
	1-4 Times	5-9 Times	10-15 Times	16-22 Times	23 or more Times	
Alcoholism .....	80	12	6	6	10	114
Drug addiction .....	33	8	4	6	35	86
Other personality disorders .....	219	74	40	18	22	373
Transient situational disturbances and behaviour disorders of childhood .....	254	126	47	13	8	448
Non-psychotic mental disorders associated with physical condition .....	17	6	1	—	4	28
Mental retardation .....	213	5	—	—	8	226
Non-psychiatric diagnosis .....	253	55	22	7	19	356
Total .....	1 698	623	263	118	234	2 936
MALES						
Senile and pre-senile dementia .....	5	—	1	—	12	18
Alcoholic psychosis .....	1	—	—	—	1	2
Other organic psychoses .....	7	1	1	—	2	11
Schizophrenia and paranoid states .....	159	112	45	47	49	412
Depressive psychosis .....	84	56	26	13	19	198
Other functional psychoses .....	86	77	35	9	22	229
Depressive neurosis .....	259	104	37	11	43	454
Other neuroses and psychosomatic disorders .....	162	68	30	19	26	305
Alcoholism .....	16	4	—	1	2	23
Drug addiction .....	18	8	5	3	16	50
Other personality disorders .....	144	58	27	12	31	272
Transient situational disturbances and behaviour disorders of childhood .....	147	63	32	12	13	267
Non-psychotic mental disorders associated with physical condition .....	5	2	1	1	2	11
Mental retardation .....	200	6	—	1	2	209
Non-psychiatric diagnosis .....	202	46	20	7	15	290
Total .....	1 495	605	260	136	255	2 751
FEMALES						

### ALCOHOL AND DRUG ADDICTS (TREATMENT) BOARD

The treatment of those addicted to alcohol and other drugs in South Australia is the responsibility of the Alcohol and Drug Addicts (Treatment) Board under the provisions of the Alcohol and Drug Addicts (Treatment) Act, 1961-1976.

The Board controls the following facilities for the treatment of alcoholism and other addictions:

- Administrative Headquarters and Information Centre—Parkside;
- Driver Assessment Clinic—Parkside;
- Elura Clinic, North Adelaide—assessment clinic and out-patients centre;
- St Anthony's Hospital, 'Birralee', Belair—short-term in-patient units (recognised under the Health Insurance Act);
- Osmond Terrace Regional Referral Clinic, Norwood—a detoxification and observation unit for patients from all areas.

An alcoholism treatment service is also provided by the Board to patients at the Flinders Medical Centre. In the country, the Board conducts a clinic at Whyalla one day a week. It also provides a consultative service to the dependency clinics at Port Pirie Hospital and at Loxton Hospital.

The efforts and operations of various church and voluntary organisations are co-ordinated by the Board. These organisations are assisted financially by the South Australian Government.

Education on the various aspects of dependency is undertaken by Board staff to a number of helping professionals both at under-graduate and graduate level.

### MATERNAL AND CHILD WELFARE

#### MOTHERS AND BABIES HEALTH ASSOCIATION

The Mothers and Babies Health Association, a voluntary body supported by government subsidy and public subscriptions, was established in 1909 and conducts family and child health work throughout the State. At 310 centres, triple certificated sisters teach management skills to parents of babies and young children, and centres conduct group or individual sessions by appointment for the management of problems in the older child up to the age of five years. The Association also conducts a twenty-four hour telephone advisory service and a correspondence service for remote and isolated families. Physiotherapeutic and family management ante-natal classes are conducted, and many eight-session parentcraft courses are conducted centrally and regionally throughout each year. There is an extensive school-lecturing service on parentcraft.

The Association, through its Torrens House mothercraft hospital, provides the only training for infant welfare sisters in South Australia. Torrens House has thirty beds and admits mothers with new-born babies for assistance in management and also treats babies and children up to the age of five years for various behavioural disorders. A day hospital and a model child-care centre are further facilities for placement and training.

Babies awaiting adoption and a social work service for single mothers, multi-problem families, and families-at-risk for child maltreatment, are further services provided.

Pamphlets and books on a wide range of topics of interest to parents are provided through the Association.

### SCHOOL HEALTH AND DENTAL SERVICES

The medical inspection of school children was first introduced into schools in 1913, and since 1951 these inspections have been the responsibility of a branch of the Department of Public Health. In January 1978, the staff and functions of the Department of Public Health, including the School Health Branch, were transferred to the South Australian Health Commission.

The medical assessment program aims to detect health impediments which are likely to affect the progress of children at school and to provide advice on appropriate management. No treatment is carried out by the Branch. All government and non-government schools are visited, usually annually. Students in Year 1 in primary schools are given a health assessment by a school nurse. In addition, vision and hearing are tested by a school nurse in Year 7. The activities of the Branch are being progressively extended in an endeavour to meet the total health needs of school children, including physiological and social needs. The role of the School Health Nurse has been extended into the community and the staff work in close collaboration with other health and welfare workers, teaching staff and parents.

School Health nursing staff have been appointed to Priority Project Schools, Child-Parent Resource Centres and Community Health Centres. These nurses are responsible to the School Health Branch, but are seconded to the respective establishments as staff members.

With the establishment of a pre-school system by the Education Department, the School Health Branch has established a service to pre-schools, under the direction of a medical officer experienced in developmental paediatrics.

During 1978, 87 780 children were examined by medical officers or screened by nurses in 605 metropolitan and country schools.

There were 3 972 children examined at the Deafness Guidance Clinic, including 2 118 examined for the first time in 1978; 1 308 of those examined in 1978 were referred to doctors or hospitals for treatment.

An assessment clinic, under the direction of a paediatrician, began in 1971 for children with learning and behavioural problems.

The total of ninety staff of the School Health Branch at the end of 1978 included twenty-one medical officers, fifty-four school nurses, four audiometrists and one social worker. Dentists using mobile vans and dentists and therapists working in 84 static clinics and the School of Dental Therapy provided dental care to 105 938 children in the 1978 school year. The field staff of the Branch in 1978 comprised 35 dentists and 155 therapists in full-time terms.

#### NOTIFIABLE DISEASES

Under the Health Act, 1935-1978, certain diseases have been designated as 'infectious' and others as 'notifiable'. It is required that cases of infectious and notifiable diseases be reported to the local board of health, which in turn advises the Central Board of Health, and that cases of tuberculosis, gonorrhoea and syphilis be notified directly to the Central Board. It should be noted that the figures in the following table refer to cases notified and this may not reflect the actual number of occurrences of the diseases in the population.

**Notifiable Diseases: Cases Notified, South Australia**

Diseases	1975	1976	1977	1978	1979
Encephalitis .....	1	—	8	4	6
Gonorrhoea .....	2 114	1 855	1 921	1 444	1 110
Hepatitis A .....	203	235	262	142	108
Hepatitis B .....	55	100	107	128	189
Malaria .....	24	22	16	21	31
Meningococcal infection .....	4	10	5	19	5
Paratyphoid .....	1	—	—	—	4
Rubella .....	73	23	17	21	91
Salmonella infection .....	243	234	230	277	461
Scarlet fever .....	16	24	—	43	—
Shigella .....	37	85	76	47	101
Syphilis .....	305	484	360	241	355
Tuberculosis .....	101	96	105	93	123
Typhoid fever .....	2	2	—	2	—
Other diseases .....	11	17	28	79	175

The Royal Adelaide Hospital maintains a venereal diseases investigation clinic at 275 North Terrace, Adelaide.

#### Anti-tuberculosis Campaign

Compulsory X-ray surveys, introduced in 1952, and the tuberculin tests given to children in Year 9 at most government and non-government schools are designed to detect active cases of the disease.

With improved living standards in post-war years and aided by the tuberculosis campaign, the incidence of the disease has been reduced to a very low level of 8.22 per 100 000 of mean population.

### Prevention of Poliomyelitis

In the 1950s South Australia was affected by an intense poliomyelitis epidemic which began in 1949 and continued for several years, reaching a peak in 1951 when 1 491 cases with 62 deaths were registered. From 1956, when mass immunisation against poliomyelitis with Salk vaccine was begun, the incidence of the disease declined. The last indigenous case of poliomyelitis in South Australia was recorded in 1963. Since then, one case, originating in the Northern Territory and treated in Adelaide was reported in 1970 and towards the end of 1974 a child with suspected poliomyelitis was investigated at the Adelaide Children's Hospital.

The oral (Sabin) poliomyelitis vaccine was first introduced in July 1967, and is now the only vaccine used against poliomyelitis in this State. It is distributed by the South Australian Health Commission to Local Boards of Health and private medical practitioners. The Health Commission also organises poliomyelitis immunisation in areas without local government and conducts a clinic at the State Immunization Centre, Norwood.

### Poliomyelitis, South Australia

Period	Cases Notified	Deaths
1950-54 .....	3 747	117
1955-59 .....	331	11
1960-64 .....	82	5
1965-69.....	—	—
1970-74 .....	2	—
1975-79 .....	—	—

### ABORTION

Until December 1969 the law relating to abortions was included in Sections 81 and 82 of the Criminal Law Consolidation Act, 1935-1966. These Sections prohibited abortions under any circumstances. However, it was possible for legally qualified medical practitioners to perform abortions in a limited number of cases, at their discretion, under Common Law provisions. No separate statistics of such operations were recorded.

In December 1969 this Act was amended by the Criminal Law Consolidation Act Amendment Act, 1969 which was assented to on 8 January 1970. The amendment inserted a new section (Section 82a) which provided for certain exceptions to the prohibitions in Sections 81 and 82. These exceptions allow for termination of the pregnancy where:

- (1) it is necessary to save life, or prevent grave injury to the woman's physical or mental health; or
- (2) the continued pregnancy would involve greater risk to the mental or physical health of the woman, or there was a substantial risk that the child would suffer from such physical or mental abnormalities as to be seriously handicapped.

To qualify under these grounds, a woman must have resided in South Australia for a period of at least two months before the termination of her pregnancy.

Under the amended Act (the Criminal Law Consolidation Act, 1935-1978), a legally qualified medical practitioner may perform an operation to terminate a pregnancy, provided that he and another legally qualified medical practitioner are both of the opinion that one of the above grounds is met. There is provision for one legally qualified medical

practitioner to terminate the pregnancy without recourse to a second opinion where it is immediately necessary to save the life, or to prevent grave injury to the physical or mental health of the pregnant woman. All operations must be performed in hospitals prescribed under regulations to the Act.

The following tables give details of abortions notified in recent years. The incidence of abortions notified per 1 000 live births registered was 145.9 in 1975, 169.9 in 1976, 195.9 in 1977 and 205.8 in 1978.

**Abortions Notified: Grounds on Which Granted, South Australia**

Grounds	1977		1978	
	Number	Per Cent	Number	Per Cent
Assault .....	1	—	3	0·1
Potential damage to foetus .....	72	2·0	78	2·0
Specified medical disorders .....	49	1·4	53	1·4
Specified psychiatric disorders .....	3 468	96·6	3 685	96·5
Total .....	3 590	100·0	3 819	100·0

### **Abortions Notified: Marital Status, South Australia**

Marital Status	1977		1978	
	Number	Per Cent	Number	Per Cent
Single .....	1 929	53.7	2 118	55.5
Married .....	1 208	33.7	1 188	31.1
Widowed .....	20	0.5	33	0.9
Divorced/separated .....	384	10.7	429	11.2
Not stated .....	49	1.4	51	1.3
Total .....	3 590	100.0	3 819	100.0

### **Abortions Notified: Age Distribution, South Australia**

Age Group (Years)	1974	1975	1976	1977	1978
	Number				
Under 20 .....	806	800	1 024	1 161	1 240
20-24 .....	744	768	841	959	1 079
25-29 .....	490	526	605	678	667
30-34 .....	353	334	348	375	428
35-39 .....	260	291	221	244	239
40-44 .....	151	136	123	117	106
45 and over .....	18	23	13	9	15
Not stated .....	30	38	44	47	45
Total .....	2 852	2 916	3 219	3 590	3 819

**Abortions Notified: Type of Termination, South Australia**

Type of Termination	1974	1975	1976	1977	1978
Vacuum aspiration .....	2 214	2 432	2 478	2 876	3 215
Dilation and curettage .....	501	339	583	450	388
Hysterectomy .....	15	16	12	11	8
Hysterotomy—abdominal .....	40	43	32	28	22
Hysterotomy—vaginal .....	2	3	1	1	—
Other .....	78	77	112	200	161
Not stated .....	2	6	1	24	25
Total .....	2 852	2 916	3 219	3 590	3 819

**OTHER HEALTH SERVICES****Blood Transfusion Service**

The Red Cross Blood Transfusion Service collects and processes blood for the routine and emergency needs of all hospitals in South Australia. Blood donations are given at the Service's centre in Adelaide, at a mobile unit visiting metropolitan and country centres, and at regional centres. In 1979 over 100 000 individual donations were received.

The Service maintains blood banks at the Royal Adelaide Hospital, Queen Elizabeth Hospital and the Flinders Medical Centre, and a reference laboratory which, in addition to performing the necessary tests on donor blood, carries out investigations for hospitals and medical practitioners. There are subsidiary blood banks at the Repatriation General Hospital, Modbury Hospital and the Lyell McEwin Hospital, Elizabeth, and regional blood transfusion centres have been established at Murray Bridge, Mount Gambier, Whyalla, Berri, Port Lincoln, Port Augusta and Wallaroo.

The cost of maintaining the Blood Transfusion Service is met by the State Government (60 per cent), the Commonwealth Government (35 per cent) and the Red Cross Society (5 per cent).

**Home Nursing**

The Royal District Nursing Society of South Australia Incorporated, through its fifty-one branches in metropolitan and country districts, provides registered nurses to attend the sick in their own homes, giving physical, psychological and supportive care.

Relatives are educated to assist in the care of patients and in helping patients to help themselves. Fees are not fixed but patients are expected to contribute according to their means. During 1978-79 a total of 444 166 visits were made by 186 full-time nurses. The Society also maintains an emergency hospital at Marree and a medical centre at Iron Knob.

Funding is provided by the South Australian Government (39.4 per cent), the Commonwealth Government (39.4 per cent), contributions, local government and fund raising (21.2 per cent).

**Aerial Medical Services**

The Royal Flying Doctor Service (RFDS) of Australia is a non-profit organisation providing medical, dental, ophthalmic, School of the Air and telegram services in remote areas of Australia. The Royal Flying Doctor Service of Australia (SA and NT Section) Inc. of the RFDS operates over an area of approximately 2 124 000 square kilometres in

South Australia and the Northern Territory; it administers control stations at Port Augusta, and Alice Springs in the Northern Territory, two aircraft being based at Port Augusta and two at Alice Springs. For the year ended 30 June 1979 these aircraft flew a total of 712 070 kilometres in transporting 1 040 patients to hospital and treating 3 062 patients at outback clinics. A further 1 277 patients received dental treatment from Adelaide dentists on regular monthly visits. Doctors gave 2 046 radio consultations to outback residents and 47 116 telegrams were transmitted from 592 licensed, fixed and portable outstations.

No flying charges are made to patients and the Service relies on donations, bequests and similar sources for approximately 30 per cent of the finance required and 70 per cent from Commonwealth and State Government grants.

#### **Ambulance Services**

The St John Council for South Australia Inc. provides a full-time ambulance service in the metropolitan area manned by regular and volunteer officers. The Council also has administrative oversight of ambulance operations in country areas and in most cases the vehicles are manned by volunteer members of the St John Ambulance Brigade. In the metropolitan area during 1978 St John ambulances travelled 2 438 168 kilometres and carried 179 583 patients. Country ambulances travelled 2 195 432 kilometres and transported 42 155 patients. Three aerial ambulances, based at Whyalla and at Adelaide, flew 2 210 hours and carried 1 270 patients in 1978. These aircraft are fitted out on the same basis as road ambulances and most of the equipment throughout the State is interchangeable. A mobile radio communication system operates throughout the State on standard frequencies.

Common training programs are based on a Manual of Casualty Care and Transport published by the St John organisation in Adelaide. The establishment of a branch of Medic Alert International, a United States organisation, has facilitated the identification of people suffering from diseases and allergies which are not readily apparent. This knowledge is of assistance to both ambulance and hospital staffs in handling and treating patients. Medic Alert is administered by St John Council South Australia for all States and Territories in Australia, excepting Western Australia.

#### **Voluntary Agencies**

There are many other voluntary bodies operating in South Australia and doing health work of a special nature. Their activities cover such fields as care of the handicapped, hospital services, care of mother and baby, care of the aged and the provision of convalescent facilities.

### **CREMATORIUMS AND CEMETERIES**

The first crematorium in South Australia, the Adelaide Crematorium, was erected by the Cremation Society of South Australia, presented to the State Government in 1903 and subsequently was closed in November 1959. Cremations are currently conducted at two cemeteries in the State. The Centennial Park Crematorium was erected in 1956 and is operated by the Centennial Park Cemetery Trust. A second crematorium, constructed by the Enfield General Cemetery Trust, commenced operations in December 1969. There were 4 204 cremations in South Australia during 1979.

Cemeteries in South Australia are divided into three main groups: those under the control of the State Government or local government authorities, those under church control and those under the control of trusts. In each of the above groups the cemeteries are financed by the usual charges for burials and by the leasing of land for burial

purposes. With church and trust cemeteries, the cost of maintenance is often derived from interest accruing from invested capital funds.

### MEDICAL PERSONNEL

The following table lists registrations with the Medical, Dental, Pharmaceutical, Physiotherapy, Chiropodists, and Nurses Boards of South Australia, and with the Board of Optical Registration.

**Professional Medical Personnel, South Australia**  
Number Registered at 31 December

Profession	1974	1975	1976	1977	1978
Medical practitioners (a) .....	3 348	3 767	4 531	4 574	4 783
Dentists .....	521	564	598	635	667
Pharmaceutical chemists .....	969	904	973	893	976
Opticians .....	95	95	101	107	108
General nurses (b) .....	12 717	13 863	14 976	16 384	17 653
Enrolled nurses .....	3 641	4 419	5 884	7 036	8 125
Midwives .....	4 787	5 196	5 653	6 085	6 505
Psychiatric nurses .....	955	1 067	1 197	1 349	1 527
Mental deficiency nurses .....	519	578	619	680	745
Infant welfare nurses .....	690	699	747	786	787
Mothercraft nurses .....	220	257	292	332	365
Infectious diseases nurses .....	34	36	37	37	72
Dental nurses .....	169	200	224	254	272
Physiotherapists .....	565	601	631	657	701
Chiropodists (c) .....	144	149	140	132	132

(a) Includes personnel not practising in South Australia. Date of registration is 31 January in the following year.

(b) General nurses may also be registered and included as midwives, psychiatric nurses, mental deficiency nurses, etc.

(c) Date of registration is 1 July.

The figures for registered medical practitioners show the number of persons registered to practise medicine in South Australia and not the number actually practising, which is estimated at approximately two-thirds of those registered. Since the 1939-45 War there has been a considerable re-organisation of general practice in medicine with a movement away from single practices to partnership and group practice arrangements.

### MEDICAL RESEARCH

#### Institute of Medical and Veterinary Science

Details of this organisation are given in Part 6.3 Scientific and Research Organisations.

#### Anti-Cancer Foundation

The forerunner of the Foundation, the Anti-Cancer Campaign Committee, was formed within the University of Adelaide in 1928. The Committee's early activities were largely devoted to establishing and developing the Radiotherapy Department of the Royal Adelaide Hospital. As demand for these facilities grew the hospital assumed responsibility for routine treatment and the Committee concentrated its activities on cancer

research. In 1962 the Committee was re-organised and became the Anti-Cancer Foundation of the University of Adelaide.

Early research was of a clinical nature, but more recently the Foundation has subsidised cancer research projects within the Institute of Medical and Veterinary Science, the Flinders University of South Australia, the University of Adelaide, the Queen Elizabeth Hospital and the Royal Adelaide Hospital.

An education program is conducted to encourage the public to seek early medical advice and prompt treatment. A mobile anti-cancer education unit makes an annual visit to all the major towns of South Australia. Social workers assist with problems associated with cancer patients being cared for at home by relatives. The Foundation has established 'Martin House' a well-equipped hostel to accommodate country patients receiving treatment at the Royal Adelaide Hospital. It has also set up the Mastectomy Rehabilitation Service to help women after breast surgery.

The income of the Foundation is derived from gifts and bequests, government grants and subsidies, and from direct public appeals. The Foundation has formed standing committees in the country districts of South Australia and the Northern Territory to assist in the expansion of its anti-cancer activities.

#### National Heart Foundation

The National Heart Foundation of Australia and its South Australian Division were established in 1960. Its aims are research into the causes of heart and arterial diseases, the rehabilitation of patients suffering from heart and arterial diseases, and the education of doctors and the general public in all aspects of cardio-vascular problems with particular emphasis on prevention and risk factors. The National Heart Campaign of 1961 raised \$5 124 000 for the work of the Foundation, of which \$662 000 was contributed in South Australia. An appeal for further funds which was made during 1969 raised \$268 000 in South Australia. Since then, the Heart Fund Continuing Support Program has been established with the aim of providing regular annual donations to support the three-part program. In 1979, the total amount raised by the Heart Fund Program is expected to exceed \$400 000.

The campaign funds are being spent on research (66 per cent), education (20 per cent) and rehabilitation (14 per cent). Research funds, distributed at the national level, support projects in various departments at the University of Adelaide, at Flinders University, and at the Institute of Medical and Veterinary Science, the Royal Adelaide Hospital and the Adelaide Children's Hospital. Research funds are also used in providing local and overseas fellowships and travel grants.

The National Heart Foundation Centre, Adelaide was established by the South Australian Division in 1963. The South Australian Division is involved in professional education of medical practitioners and paramedical staff, and an increasing emphasis is placed on community education in order to make the public aware of the symptoms of heart attack and what to do if one occurs, and to stress the risk factors which increase the chances of having a heart attack.

A Heart Risk Assessment Clinic was opened at the Heart Centre in February 1978. The aim of the clinic, which is staffed by a registered nurse and assistant, is to detect abnormalities in blood pressure and blood fat levels. A complete assessment of risk factors is carried out, covering height and weight measurements, smoking and exercise, in addition to the taking of a blood specimen and blood pressure measurement. Clients are referred back to their own doctors for further advice.

With complete financial support from the Lions' International Heart Research Fund, a Mobile Educational Unit was purchased in February 1979. The unit is used in

community education with emphasis on heart-lung resuscitation classes in both city and country areas.

### STATE GOVERNMENT EXPENDITURE ON PUBLIC HEALTH

The following table shows the net expenditure by the State Government from Consolidated Revenue Account on various aspects of health which is defined as excluding sewerage, drainage and water supply. The figures include both the cost of maintaining State Government activities and subsidies paid to other organisations active in this field. For further details see Part 11.3 State Government Finance.

#### Consolidated Revenue Account: Outlay on Health, South Australia

Purpose	1974-75	1975-76	1976-77	1977-78(a)
		\$'000		
General administration, regulation and research .....	7 746	9 548	12 724	7 644
Hospital and clinical services:				
Mental health .....	17 647	22 937	27 805	3 068
Other hospital and clinical services .....	68 510	126 951	174 113	153 201
Other health services:				
Preventive services .....	1 061	1 189	1 302	636
Maternal and infant health .....	1 485	1 951	2 473	—
Domiciliary care .....	999	1 682	2 215	10
Health of school children .....	1 795	2 437	3 672	—
Community health facilities .....	846	2 419	4 196	643
Ambulance services .....	895	779	979	—
Other .....	7 439	3 678	4 710	768
Total .....	108 423	173 571	234 189	165 970

(a) Net cost to the State only. During 1977-78 the activities of the Health Commission and the Hospitals Department were controlled through a Deposit Account at Treasury.

## 6.6 SOCIAL WELFARE

The Commonwealth and State Governments and a large number of voluntary agencies provide social welfare services for the population. The Commonwealth Government is concerned largely with providing fixed monetary pensions and benefits and repatriation services. It also provides, either directly or through State and local government authorities and voluntary agencies, for a wide range of welfare services for people with special needs. State agencies operate in the field of child welfare and distribute emergency relief in circumstances where Commonwealth Government assistance is not available. The voluntary agencies, many of which receive government aid, provide a wide range of services in various fields of social welfare.

### COMMONWEALTH GOVERNMENT PENSIONS AND BENEFITS

#### EXPENDITURE

The following table sets out Commonwealth Government expenditure in South Australia on social welfare, which includes expenditure under the Social Services Act, other Acts, National Health Service and disability and service pensions. The figures shown do not include administration costs.

**Commonwealth Government Expenditure on Social Welfare, Selected Items  
South Australia<sup>(a)</sup>**

Type of Benefit	1974-75	1975-76	1976-77	1977-78	1978-79
\$'000					
<b>Social Services Act:</b>					
Age and invalid pensions .....	184 218	234 266	273 814	333 579	374 344
Widows pensions .....	23 873	30 143	32 339	38 613	45 456
Family allowances (b) .....	20 237	22 896	87 491	90 483	84 100
Maternity allowance .....	627	597	522	639	264
Unemployment benefits .....	20 475	36 002	48 097	(c)84 166	116 028
Sickness benefits .....	4 855	6 971	8 574	(c)9 864	9 810
Supporting parent's benefits .....	9 293	15 210	18 591	(c)23 874	27 943
Delivered Meals Subsidy Act .....	172	203	276	260	254
Aged or Disabled Persons Homes Act (d) .....	6 733	4 838	4 170	4 467	2 646
Aged Persons Hostels Act .....	753	591	1 274	2 189	1 660
States Grants (Home Care) Act .....	942	1 388	1 147	1 820	1 403
States Grants (Deserted Wives) Act	1 045	1 509	1 879	3 203	3 143
National Health Service (e) .....	82 399	223 151	177 894	204 412	197 366
Disability pensions (f) .....	26 641	27 971	31 042	34 784	34 266
Service pensions (f) .....	15 133	21 406	28 667	37 234	43 953

(a) Where applicable the amounts shown include payments for supplementary assistance, allowances and additional pensions for children.

(b) From 15 June 1976 child endowment superseded by family allowance. Until 1976 payments were made to claimants' bank accounts every twelve weeks. Since then payments were four-weekly and from 15 May 1979 payments were changed to monthly intervals.

(c) Includes Northern Territory from 1977-78.

(d) Includes Personal Care Subsidy (\$1 813 140 in 1978-79).

(e) Includes Northern Territory for some items.

(f) Includes Northern Territory.

### COMMONWEALTH SOCIAL SECURITY

Brief details of Commonwealth Government pensions and benefits are given in this section; however, in discussing the eligibility of persons for the various payments, all the necessary qualifications and exceptions to the general rule have not been delineated.

#### Age and Invalid Pensions

Age pensions may be granted to men aged sixty-five and over and women aged sixty and over, who have lived in Australia continuously for a period of ten years.

Invalid pensions are payable to persons aged sixteen years and over who are permanently incapacitated for work to an extent of at least 85 per cent, or are permanently blind. Where the incapacity or blindness occurred outside of Australia, other than during a temporary absence, ten years continuous residence is necessary.

If a person subject to the ten year qualification for either pension has completed five years but not ten years continuous residence, but has lived in Australia for periods which, in total exceed ten years, he may be eligible. Residence in New Zealand, the United Kingdom or an Australian external Territory (except Norfolk Island) may be treated as residence in Australia. Absences from Australia may, in certain circumstances, be treated as residence.

From November 1979, for both age and invalid pensions, the maximum rate for an unmarried pensioner, or for a married pensioner whose husband or wife was not receiving an age or invalid pension, a tuberculosis allowance or a service pension, was \$57.90 a week. Where married pensioner couples are living apart for an indefinite period because of the illness or infirmity of either or both, each receives a pension at the single

rate. The maximum married rate for a couple both being pensioners was \$48.25 a week each. A wife's pension is payable, subject to an income test, at the married rate to an age or invalid pensioner's wife who does not qualify for an age, invalid or repatriation service pension in her own right.

**Age, Invalid and Wife Pensions, South Australia**  
**Number of Pensioners**

At 30 June	Age Pensioners			Invalid Pensioners			Wife Pensioners Total
	Males	Females	Total	Males	Females	Total	
1975 .....	33 875	73 404	107 279	9 703	6 645	16 348	4 972
1976 .....	36 027	76 890	112 917	10 667	6 645	17 312	5 646
1977 .....	37 709	80 187	117 896	11 835	6 742	18 577	6 417
1978 .....	40 161	82 907	123 068	12 345	6 528	18 873	7 287
1979 .....	41 950	84 741	126 691	13 492	6 677	20 169	8 370

An additional pension up to \$7.50 a week is payable for all children under sixteen years or who are full-time students and under twenty-five years. An unmarried age or invalid pensioner having the custody, care and control of a child under sixteen years or who is a full-time student and under twenty-five years is paid a guardian's allowance of \$4 a week in addition to the pension. The guardian's allowance is increased to \$6 a week if there is a child under six years, or if there is an invalid child under sixteen years requiring full-time care and attention.

Up to \$5 a week extra may be paid to a single pensioner or to a married couple (\$2.50 each) who pay rent or lodging. For single and married persons the maximum rate of supplementary assistance is reduced by the amount by which the pensioners' income exceeds \$1 a week.

Age, invalid and wife's pensions, unless the pensioner is seventy years of age or over, or permanently blind, are subject to an income test. From November 1978, age pensions payable free of the income test will remain at \$51.45 a week (single) and \$42.90 a week (married), but pensioners may qualify for increases subject to the income test. Additional allowances are generally subject to an income test regardless of age. Under the income test, a full pension is paid if the annual income does not exceed \$1 040 (for a single pensioner) or \$1 794 (for a pensioner couple). If the income exceeds \$1 040 (or \$1 794), the annual rate of pension is reduced by half the excess.

Certain types of income are exempted. The main exemptions are: gifts or allowances from children, parents, brothers or sisters; benefits from friendly societies; family allowances or other payments for children; Commonwealth Government health benefits and amounts received from registered benefit organisations.

### Widows Pensions

Widows pensions are paid to widows and other women who satisfy certain conditions; there is a test on income.

There are three classes of pensions:

Class A, a widow with at least one dependent child who is a child of the widow or a child who entered her care before she became a widow;

Class B, a widow of at least fifty years of age who has no child or, if she has a child, the child does not qualify her for a Class A pension and a widow of at least forty-five years of age whose Class A pension ceases because she no longer has a qualifying child;

Class C, a widow under fifty years of age who has no child and is in necessitous circumstances within twenty-six weeks of her husband's death.

For Classes A and B the term 'widow' includes a deserted wife who has been deserted at least six months, a divorcee, a woman whose husband has been in prison at least six months and a woman whose husband is in a mental hospital.

For all classes the term 'widow' may also include a woman who was the common law wife of a man for at least three years immediately before his death. 'Child' includes a full-time student between the age of sixteen and twenty-five.

A residential qualification is not required if a couple were permanent residents when the husband died or if an event occurs—such as divorce—which qualifies a woman as a 'widow'. In other circumstances five years continuous residence immediately preceding a lodgment of claim or ten years residence at any time is required. Certain absences are not considered as breaking continuity of residence, and residence in New Zealand, the United Kingdom or an Australian external Territory (except Norfolk Island) counts as residence in Australia. The income test operates similarly to that for age pensions.

**Widows Pensions, South Australia**  
**Number of Pensioners At 30 June**

Class	1975	1976	1977	1978	1979
A .....	6 154	5 956	6 220	6 757	7 600
B .....	5 662	5 978	6 390	6 852	7 290
C .....	6	10	8	3	16
Total .....	11 822	11 944	12 618	13 612	14 906

From November 1979, the maximum rates of pension were: Class A widows, \$57.90 a week, plus a mother's allowance of \$4 a week (\$6 if there is an invalid child or a child under six years), plus \$7.50 a week for each child under sixteen years or a full-time dependent student; for Class B widows, \$57.90 a week; for Class C widows, \$57.90 a week.

An additional payment of up to \$5 a week may be paid to a widow pensioner who pays for rent or lodging, and whose income is under \$6 a week. In the case of a Class A widow the income limit may be increased by up to \$6 a week for each child.

#### **Supporting Parent's Benefit**

In November 1977, supporting parent's benefit was introduced making payment available to men bringing up children on their own on the same basis as it was available for women in similar situations. A man may qualify for the benefit if he is a widower, divorcee, separated husband or *de facto* husband, a man whose wife or *de facto* wife is in prison or a mental hospital or an unmarried father including a man whose *de facto* wife has died. There is a six month qualifying period for this benefit as there was for supporting mother's benefit. The benefit continues to be payable to an unmarried mother, a mother who is a deserted *de facto* wife, a *de facto* wife of a prisoner or a separated wife, from a date six months after the event which gives rise to eligibility (e.g. the birth of a child or separation). The rates, income test and other conditions are the same as for a Class A widows pension.

### Portability

Social Services pensions once granted in Australia, continue to be paid if the pensioner goes abroad. There are some exceptions which affect only a small proportion of pensioners.

### Persons Living Overseas

Pensions may be granted to persons living outside Australia subject to the following conditions:

- (1) in the case of the age pension, the claimant had lived thirty years in Australia and was of age-pension age or within five years of that age at the time of departure from Australia; in the case of invalid or widow's pensions, the claimant became permanently incapacitated for work (or permanently blind) or widowed in Australia;
- (2) the claimant left Australia before 8 May 1973;
- (3) the claimant is in special need of financial assistance.

In addition, the claimant is required to satisfy the ordinary conditions for grant of pension in Australia, except that of living in Australia.

### Family Allowances

Persons resident in Australia who have the custody, care and control of one or more children under the age of sixteen are eligible for family allowance (formerly known as child endowment); approved institutions of which children are inmates are similarly eligible. Family allowance is also paid for full-time students between the ages of sixteen and twenty-five years. There is no income test on family allowances, but one year's residence in Australia is required if the mother and child were not born in Australia; this requirement is waived if the Department of Social Security is satisfied that they are likely to remain in Australia permanently.

At 15 May 1979 family allowance was paid at the rate of \$15.20 a month for the first eligible child; \$21.70 for the second; \$26 for the third; \$26 for the fourth; \$30.35 for the fifth and each subsequent child. Family allowance of \$21.70 a month is paid for each child in an institution.

**Family Allowances, South Australia**

At 30 June	Families			Institutions			Total Number of Children	
	Number of Families (a)	Number of Children		Approved Institu- tions	Number of Children			
		Under 16	Students (b)		Under 16	Students (b)		
1975 .....	178 978	364 047	25 625	68	1 045	150	390 867	
1976 .....	179 187	358 746	28 100	70	1 072	102	388 020	
1977 .....	188 229	379 275		54	831		380 106	
1978 .....	189 193	376 816		54	818		377 634	
1979 .....	185 591	364 696		55	751		365 447	

(a) Before 1977 excludes those families with student children aged 16 and over only.

(b) Until June 1976 student endowment was payable for student children aged 16 to 21 years. With the introduction of the family allowance scheme the age range for student children was extended to 25 years.

### Handicapped Child's Allowance

A handicapped child's allowance was introduced in December 1974. The allowance is payable at the rate of \$65 a month to the parent or guardian of a child under sixteen years of age who is severely or substantially handicapped physically or mentally and requires constant care and attention in the family home. In November 1978 this allowance was

extended to cover handicapped children under twenty-five years of age who are full-time students but who do not receive an invalid pension.

#### Double Orphans Pension

A pension of \$47.70 a month is payable to the guardian of a child under sixteen years or a full-time student between the ages of sixteen and twenty-five years who has both parents dead or one dead and the other missing. The benefit is also payable in respect of either an adopted child or a child whose sole surviving parent is a long-term inmate of a prison or mental hospital.

If an orphan child is being cared for by an approved charitable or religious institution the pension may be paid to the institution.

#### Unemployment and Sickness Benefits

Unemployment and sickness benefits are paid to persons who suffer temporary loss of regular earnings because of unemployment, sickness or accident. There is a means test on income but not on property. Persons eligible must be between sixteen and sixty-four years of age (fifty-nine for women) with either twelve months residence or the intention to reside permanently in Australia. A person receiving an alternative social security pension is ineligible for unemployment and sickness benefits.

To qualify for unemployment benefit a person must (a) be unemployed and be able to show that unemployment was not because of his being a direct participant in a strike, (b) be able and willing to undertake suitable work, and (c) have taken reasonable steps to secure work, including registration with the Commonwealth Employment Service.

The amount of income which a person may receive and still qualify for the maximum rate of benefit is \$6 a week for an adult or married person under twenty-one, and \$3 a week for a single person under twenty-one with at least one parent residing in Australia. The benefit is reduced by any amount in excess of these figures. For unemployment and sickness benefit, the income of the claimant's husband or wife is taken into account. Special conditions apply where the wife receives an age, invalid or service pension.

From November 1979, the weekly rates of sickness benefit are \$57.90 for a single person aged 18 years or more, \$96.50 for a married couple and \$36.00 for a person over sixteen, but under eighteen years. The weekly rates of unemployment benefit are \$57.90 for a single person aged 18 years or more with dependants, \$96.50 for a single person aged 18 years or more without dependants, \$96.50 for a married couple and \$36.00 for a person over sixteen but under eighteen years. An additional \$7.50 a week is payable in all cases for each child.

#### Unemployment and Sickness Benefits, South Australia

Year	Unemployment		Sickness		Special (a)	
	Number of Benefits Granted	Average Number on Benefit (b)	Number of Benefits Granted	Average Number on Benefit (b)	Number of Benefits Granted	Average Number on Benefit (b)
1974-75 ....	61 944	10 557	9 311	1 978	1 125	373
1975-76 ....	80 535	15 010	13 273	2 224	2 458	469
1976-77 ....	72 008	16 147	14 101	2 256	2 383	534
1977-78 ....	86 905	25 949	13 233	2 474	2 787	554
1978-79 ....	85 106	35 762	11 362	2 438	3 101	632

(a) Excludes special benefits to migrants in accommodation centres.

(b) Average number at the end of each week.

There is a waiting period of seven days during which unemployment or sickness benefit is not payable, but this waiting period is not required more than once in any period of thirteen weeks. However, for unemployment benefit where the applicant has been taking reasonable steps to obtain work since becoming unemployed, the date of commencement of unemployment benefit may be brought forward for up to seven days. Where a person has been unemployed for more than seven days and satisfies these conditions, payment begins from the date of claim.

### **Supplementary Assistance Allowance**

Supplementary assistance is payable, subject to an income test, to an age, invalid, wife or widow pensioner, or a person receiving a supporting parent's benefit if he or she pays rent or lodging and has little or no income apart from the pension or benefit. A similar payment, known as supplementary allowance, of up to \$5 a week may be made to a sickness beneficiary who has received benefit for a continuous period of six weeks.

### **Special Benefits**

A special benefit may be granted to a person not normally qualified for unemployment or sickness benefit or any other social service pension or allowance, or a service pension, if he is unable to earn a sufficient livelihood for himself and his dependants. The maximum rate of payment is the same as for unemployment or sickness benefit, whichever is appropriate.

### **Rehabilitation**

The Commonwealth Rehabilitation Service assists people who are unable to work because of long-term disability or who have had to give up their employment because of sickness or injury. It aims at helping disabled people to reach their maximum physical, mental and social usefulness and to prepare them for suitable employment.

#### **Rehabilitation, South Australia**

Year	Number Accepted for Rehabilitation	Number Placed in Employment	Expenditure (a)
1974-75 .....	319	171	\$ 982 168
1975-76 .....	323	133	1 296 422
1976-77 .....	266	147	1 418 289
1977-78 .....	371	164	1 541 343
1978-79 .....	435	121	1 782 725

(a) Excludes capital expenditure on sites and buildings, and administrative cost of the Rehabilitation Service.

In recognising the need for rehabilitation assistance of a social/vocational nature to be made more freely available, amendments to Part III of the Social Services Act came into operation with effect from 10 November 1977.

The effect of the changes has been to widen the categories of persons who may be provided with Commonwealth Rehabilitation Service treatment and training free of charge. There has been no alteration to the traditional categories of persons which the service has been able to accept *i.e.* pensioners, beneficiaries, etc. However, it is now possible for the Service to accept, without charge, handicapped persons from within the broad working age group who are neither pensioners nor beneficiaries but who would, in

spite of residual handicaps, have reasonable prospects, with rehabilitation assistance, of either returning to gainful or sheltered employment or increasing their capacity to lead an independent life at home.

The Commonwealth Rehabilitation Service provides direct services through its centres and regional units. The facilities are designed and staffed to meet the diverse needs of disabled people.

In centres, skilled case work teams, including occupational and speech therapists, physiotherapists, nursing sisters, social workers, psychologists and vocational counsellors are working under medical supervision and using modern methods and equipment to help the disabled in achieving maximum recovery.

### Funeral Benefits

A funeral benefit of up to \$20 is payable to any person liable for the funeral costs of a deceased age or invalid pensioner. A higher benefit of up to \$40 is payable to an age, invalid, wife or widow pensioner, or a person in receipt of supporting parent's benefit, liable for the funeral cost of a deceased spouse, child or another such pensioner or beneficiary. For these benefits 'pensioner' means a person who satisfies the Commonwealth Government pensioner 'fringe' benefits income test. 'Deceased pensioner' also refers to a person who satisfied those conditions before his death.

During 1978-79, 4 441 claims for funeral benefits were granted in South Australia.

### Homes for the Aged

The *Aged or Disabled Persons Homes Act* 1954 provides that grants may be made to certain organisations towards the capital cost of erecting or purchasing approved homes for aged or disabled people. Religious, charitable, ex-servicemen's organisations and local government bodies as well as any other approved organisation are eligible. Grants are made on the basis of \$2 for each \$1 (excluding government assistance and borrowed money, except that borrowed by local government bodies) raised by an organisation. The maximum subsidy limits under the Act are \$11 130 for a single unit and \$12 910 for a double unit, plus a maximum of \$1 920 a unit for land.

At 30 June 1979, 656 grants had been approved in South Australia since the inception of the scheme in 1954. The amount granted, \$49 676 648, was associated with the accommodation of 11 108 persons. Since October 1969, a personal care subsidy has been provided in terms of this Act, to eligible organisations providing personal care services in hostel-type accommodation for persons of eighty years of age and over. In 1974, the subsidy was increased to \$15 per week, and the cover extended to persons who, though not yet eighty years of age, required personal care services.

In 1978-79 expenditure under this Act in South Australia totalled \$2 645 742; of this amount \$832 602 was for capital grants and \$1 813 140 for personal care subsidies.

The *Aged Persons Hostel Act* 1972 is designed to encourage the provision of hostel accommodation for the aged. Subject to certain conditions, the Commonwealth meets the cost of providing additional hostel accommodation by eligible organisations up to a maximum of \$16 700 a person. The Commonwealth also pays an additional grant of up to \$2 400 a person for the purchase of land; a further \$250 a person is available for furnishings.

The *States Grants (Home Care) Act* 1969, which is administered by the Department of Social Security, provides for financial assistance to the States to assist them in developing senior citizens' centres and a range of home care services providing housekeeping or other domestic assistance for aged persons in their homes. Payments to South Australia

for the year ended 30 June 1979 amounted to \$423 069 for senior citizens' centres, \$65 037 towards the salaries of welfare officers employed in connection with senior citizens' centres and \$915 127 for home care services.

#### **Delivered Meals Service**

Under the *Delivered Meals Subsidy Act* 1970, financial assistance is provided to organisations to establish, maintain, expand and improve 'meals on wheels' services. These organisations must be non-profit, charitable, benevolent or welfare bodies not controlled by the Commonwealth or State Governments. The basic rate of subsidy is 30 cents for each meal with which an approved vitamin C supplement is provided and 25 cents for all other eligible meals. The South Australian subsidy totalled \$253 983 in 1978-79.

#### **Homeless Persons' Assistance**

The *Homeless Persons' Assistance Act* 1974 provides for assistance to non-profit organisations and local government bodies which provide accommodation, food and social welfare services for homeless men and women.

The Act enables grants to be made to eligible organisations to meet the cost of purchasing, constructing, altering or renting buildings to be used as homeless persons assistance centres, as well as to meet the cost of purchasing and installing furniture and equipment for such centres. Grants also meet half the salary of a social welfare worker employed at a centre, and help to meet the cost of providing food and accommodation for homeless persons at an approved centre, or of meals provided at such centres for non-residents. The rate of the food and accommodation subsidy has been prescribed at 75 cents per day and the rate of meals subsidy at 25 cents per meal. Up to 30 June 1979 funds totalling \$319 462 had been made to eligible organisations in South Australia.

#### **Handicapped Persons Assistance**

Under the *Handicapped Persons Assistance Act* 1974, financial assistance is provided by the Commonwealth Government to eligible organisations conducting sheltered workshops, training centres, activity therapy centres and residential accommodation for handicapped persons. Subsidy is also available towards the cost of rehabilitation facilities (including holiday homes) which are ancillary to or provided together with an approved program of training, activity therapy, sheltered employment or residential accommodation. All capital and equipment subsidies are paid at a rate of \$4 for every \$1 raised from non-government sources. A subsidy covering 50 per cent of actual salaries may be paid toward the cost of salaries of most staff. A higher rate of 100 per cent may be paid during an initial period in the case of some new enterprises. Since October 1970, a training fee of \$500 has been paid to sheltered workshop organisations for each handicapped person who remains in normal employment for twelve months following at least six months training by the organisation.

During the year ended 30 June 1979, expenditure totalling \$8 284 163 was approved under the Act to be paid to eligible organisations in South Australia.

#### **Handicapped Children's Benefit**

A benefit is payable by the Commonwealth Government for each physically or mentally handicapped child who is under sixteen years of age and resides in an approved home conducted by a charitable organisation. From November 1976, the rate of benefit has been \$5 per day. In 1978-79, expenditure by the Commonwealth Government on handicapped children's benefits in South Australia and the Northern Territory was \$228 000. At 30 June 1979, 176 eligible handicapped children were accommodated in eight approved homes.

### Reciprocal Agreements

*New Zealand.* An agreement exists between the Governments of Australia and New Zealand for reciprocity in social services. The arrangements cover age, invalid, wives and widows pensions, family allowances, and unemployment and sickness benefits, and apply to both permanent and temporary changes of residence. Residence in one country may be treated as residence in the other country in relation to entitlement to benefits in which a residential qualification applies. Persons from one country taking up permanent residence in another country may qualify for any of the specified benefits of the new country under the same conditions as apply to citizens of that country. Persons in receipt of any of the specified benefits in one country may continue to receive those benefits while temporarily absent in the other country.

*Britain.* A reciprocal agreement on social services exists between Britain and Australia. Under the current agreement residence in one country may be treated as residence in the other country as the basis for entitlement to benefits in which a residential qualification applies. Australians going to Britain for permanent residence are treated in Britain as if national insurance contributions had been paid while in Australia, so that they can qualify for various National Insurance benefits. There is also provision for the safeguard of social service rights for persons going from one country to the other for temporary residence.

### Deserted Wives Assistance

The *State Grants (Deserted Wives) Act 1968* provides for assistance to be given by the Commonwealth Government to the States in respect of aid for needy mothers with children, where there is no breadwinner and the mothers are not eligible for benefits under the Social Services Act. Broadly these include deserted wives and deserted *de facto* wives during the first six months of desertion; wives and *de facto* wives of prisoners during the first six months of the husband's imprisonment; and other separated wives and unmarried mothers during the first six months after the birth of a child or separation.

### Children's Services

Capital and recurrent grants are available for a range of projects including child care services under the Children's Services Program, family support services, children with special needs and accommodation service for young people.

### Telephone Rental Concessions

The Department of Social Security with the Australian Telecommunications Commission provides telephone rental concessions to qualified pensioners in the form of a one-third reduction in annual rental charges.

### The Telephone Interpreter Service

A Telephone Interpreter Service is operating through the Department of Immigration and Ethnic Affairs as an adjunct to migrant welfare services. It acts as a multi-lingual information service both to migrants, especially those with queries regarding government services, and to professional people experiencing language problems with a patient or client.

## NATIONAL HEALTH SERVICES

**Expenditure**

The following table shows Commonwealth Government expenditure in South Australia from the National Welfare Fund, the Health Insurance Fund and under the *States Grants (Hospital Operating Costs) Act 1976*, on the various aspects of the national health services. The amounts shown are the direct costs of these benefits and services and do not include the administrative costs.

National Health Services Expenditure, South Australia

Type of Benefit	Year First Paid	1975-76	1976-77	1977-78	1978-79
\$'000					
<b>National Welfare Fund:</b>					
Hospital and nursing home benefits (a) (b)	1946	(c) 21 344	(c) 16 089	(c) 16 463	(c) 19 138
Medical benefits (b)	1953	(d) 6 942	(d) 65	(d) 33	(d) 5
Pensioner medical service	1951	(d) 539	—	—	—
Deficit financing of nursing homes (e)	1975	9 513	13 191	12 554	12 000
Domiciliary nursing care (f) (g)	1973	852	912	869	796
Pharmaceutical benefits (g)	1948	13 106	9 949	10 417	10 146
Pensioner pharmaceutical benefits (g)	1951	9 884	10 086	10 924	13 167
Anti-tuberculosis campaign	1947	655	559	110	55
Other	—	769	1 348	1 428	1 662
<b>Health Insurance Fund:</b>					
Medical benefits (g) (h)	1975	57 380	46 507	28 545	14 768
Hospital benefits (i)	1975	74 600	73 616	(g) 122 757	(g) 125 303
Health program grants	1975	1 998	1 771	312	326
States Grants (Hospital Operating Costs) Act (j)	1976	25 569	3 803	—	—
<b>Total</b>		<b>223 151</b>	<b>177 894</b>	<b>204 412</b>	<b>197 366</b>

(a) Includes Northern Territory for nursing home benefits and payments.

(b) Includes benefits and payments for Northern Territory residents insured with South Australian hospital and medical organisations. There are no organisations registered in the Northern Territory.

(c) Includes benefit payments for hospitalisation before 1 April 1976.

(d) Payments for medical services rendered before 1 July 1975.

(e) Commenced 1 January 1975.

(f) Commenced March 1973.

(g) Includes Northern Territory.

(h) Includes advances to cash payment centres.

(i) Excludes payments in respect of recognised hospitals made between 26 May 1976 and 1 October 1976.

(j) Includes payments made to recognised hospitals for the period between 26 May 1976 and 1 October 1976.

**National Health Benefits**

In May 1978, the Minister for Health announced that coverage for the whole Medical Benefits Schedule was to be changed to 75 per cent with a maximum patient payment of \$10 when the Schedule fee was charged, except for pensioners with Pensioner Health Benefit entitlement and their dependants, which would remain at 85 per cent or the Schedule fee less \$5 whichever was the greater.

This change came into effect on 1 July 1978 and was applicable to both Standard Medibank and privately insured persons.

The Treasurer announced in the 1978-79 Budget speech new health insurance arrangements, which were introduced on 1 November 1978. These arrangements were designed to provide all residents with a basic level of coverage against the costs of medical and hospital treatment. Individuals were free to choose additional coverage from private insurers. Further changes came into effect on 1 September 1979.

### *Medical*

From 1 November 1978 all Australian residents were eligible to receive a new Commonwealth medical benefit to cover 40 per cent of Schedule medical fees with a maximum patient contribution of \$20 for any one service where the Schedule fee was charged.

For pensioners with Pensioner Health Benefit cards, and their dependants, there was no change to the level of medical benefits. Doctors were able to bulk-bill the Department of Health for these patients and receive 85 per cent of the Schedule fee or the Schedule fee less \$5 whichever was the greater.

Eligible pensioners were still entitled, under the Pharmaceutical Benefits Scheme, to receive a wide range of medicines free of cost.

A new concept of bulk-billing was introduced whereby the doctors received from the Government 75 per cent of the Schedule fee as payment in full for the service rendered to a person identified by the doctor as disadvantaged (provided the patient was not privately insured). Bulk-billing for all other persons ceased.

Two main changes to the medical benefits system were introduced from 1 September 1979.

- (1) The Commonwealth Government now meets all costs over \$20 for each medical service up to the limit of the Schedule fee.
- (2) The Commonwealth Government no longer pays 40 per cent of the Schedule fees up to \$20.

All patients (other than pensioners with Pensioner Health Benefit cards and disadvantaged people) are now responsible for medical costs up to a Schedule fee of \$20. Where the Schedule fee is above \$20, the patient pays \$20 and the Commonwealth is responsible for the remainder up to the Schedule fee.

People with medical insurance are able to claim part or all of these costs from their registered medical benefits organisation (depending on the cover for which they have insured), but uninsured patients have to meet the costs up to \$20 per service themselves.

All patients, whether insured or not, are entitled to Commonwealth benefit for services where the Schedule fee is more than \$20. Uninsured persons received this benefit by registering with an organisation that has agreed to pay the benefit on behalf of the Commonwealth.

Charges in excess of the Schedule fee are required to be paid by the patients.

### *Medical Benefit Exclusions*

Medical benefit is not payable in respect of a professional service that is a medical examination for the purposes of life insurance, superannuation or provident account schemes, or admission to membership of a friendly society.

Unless the Minister for Health otherwise directs, medical benefit is not payable in respect of a professional service where:

- (1) the service has been rendered by or on behalf of or under an arrangement with the Commonwealth, a State or a local governing body, or an authority established by a law of the Commonwealth, a State or an internal Territory;

- (2) the medical expenses were incurred by the employer of the person to whom the service was rendered; or
- (3) the person to whom that service was rendered was employed in an industrial undertaking and that service was rendered to him for purposes connected with the operation of that undertaking.

Medical benefit is not payable where the service was rendered in the course of carrying out a mass immunisation or for certain health screening services or while the patient was a (free) standard ward patient in a recognised (*i.e.* public) hospital.

The following table gives details of Commonwealth Government hospital benefit payments from 1975-76 to 1978-79.

### Hospital Benefits, South Australia

Type of Benefit	1975-76	1976-77	1977-78	1978-79
AMOUNT PAID (\$'000)				
<b>National Welfare Fund:</b>				
Hospitals;				
Insured patients (a) (b) .....	2 018	25	-5	1
Uninsured patients (c) .....	3	—	1	—
Special Account Advance and				
Deficit payments (d) (f) .....	6 453	(e) 2 733	(e) 60	—
Subsidised Health Benefits Plan				
payments (a) (f) .....	712	30	17	1
Patients treated without charge (c)	2	—	—	—
Pensioner patients (f) .....	194	—	1	—
Nursing home patients (g) .....	11 769	13 179	16 386	19 135
Other nursing home payments (h) ....	193	122	2	—
Total National Welfare Fund ....	21 344	16 089	16 463	19 138
<b>Health Insurance Fund:</b>				
Hospitals;				
\$16 per day payments to private hospitals (i) .....	7 730	7 789	7 187	7 367
Payments to recognised hospitals (j)	66 798	65 591	(k) 114 859	116 574
Section 34 payments to private hospitals .....	72	236	711	1 362
Total Health Insurance Fund	74 600	73 616	122 757	125 303

(a) Includes benefits and payments for Northern Territory residents insured with South Australian organisations.  
 (b) Hospitalisation before 1 April 1976. (c) Hospitalisation in all hospitals before 1 July 1975 and in private hospitals for uninsured patients and patients treated without charge between 1 July 1975 and 1 April 1976. (d) Reimbursements to registered hospital benefits organisations for losses incurred on chronic or pre-existing ailments and long-term illness. (e) Hospitalisation before 1 October 1976. (f) Hospitalisation before 1 July 1975. (g) Includes Northern Territory before 1 December 1977 when Northern Territory nursing homes adopted the Deficit Financing arrangements. (h) Includes payments for Northern Territory residents insured with South Australian organisations and covers Subsidised Health Benefits Plan fund benefit reimbursements and Special Account Advance and Deficit payments payable from 1 January 1973. (i) Includes benefits paid to Australian citizens whose hospital care was undertaken overseas. (j) Excludes payments under the *States Grants (Hospital Operating Costs) Act 1976*. (k) Includes Northern Territory.

### Hospital

The system of standard hospital coverage, by which everyone without private insurance for hospital benefits is entitled to free standard ward accommodation in recognised

hospitals with treatment by doctors engaged by the hospital, continued without alteration.

#### *Private Insurance*

From 1 November 1978 registered medical benefits organisations including Medibank Private were required as a condition of their registration, to offer a basic medical benefits table which, when added to the Commonwealth medical benefit, provided coverage for 75 per cent of the Schedule fee with a maximum patient contribution of \$10 for any one service where the Schedule fee was charged.

Persons who elected to insure for the 75 per cent level, which comprised both the Commonwealth and fund benefit, were eligible for refunds from their organisations.

Those who elected not to insure for fund benefits were required to register with a registered medical benefits organisation that had agreed to pay the new Commonwealth medical benefit to uninsured persons on behalf of the Commonwealth.

Registered medical benefits organisations claimed reimbursement of the Commonwealth medical benefits paid for both insured and uninsured people from the Department of Health.

In addition to providing a basic medical benefits table, registered medical benefits organisations were able to offer a variety of medical benefits packages up to a maximum of the Schedule fee level.

Registered hospital benefits organisations were also obliged to continue providing a basic table covering the hospital charges raised for shared ward accommodation in recognised hospitals, then \$40 a day, for patients who chose to be treated by the private doctor of their choice. Organisations were also able to provide optional tables which included deductibles if they so chose. The basic and optional tables provided contributors with nursing home benefits. Since 1 October 1977, all payments by registered hospital benefits organisations in respect of nursing home patients have been made under the Reinsurance arrangements.

Registered hospital benefits organisations were also able to continue offering supplementary benefits covering charges raised for single bed wards in recognised hospitals and benefits to wholly or substantially cover private hospital charges. In addition these organisations were free to devise attractive and competitive tables of ancillary benefits.

Since 1 September 1979 registered medical benefits organisations have continued to offer a basic medical benefit table which provides coverage for 75 per cent of the Schedule fee, with a maximum payment by the patient of \$10 for any service where the doctor charges the Schedule fee. Without the previous 40 per cent Commonwealth medical benefit, organisations are now required to meet benefits, to the insured level for the first \$20 of each medical service.

They also continue to provide a basic hospital benefits table covering accommodation in shared rooms of recognised (*i.e.* public) hospitals (at the increased charge of \$50 a day), with doctor of choice and supplementary benefits table for the increased charge of \$75 a day for single bed wards in recognised hospitals.

Most organisations also continue to offer variations of the basic tables, supplementary and ancillary tables.

#### *Financing*

The Commonwealth Government pays medical benefits for Schedule items above \$20 up to the Schedule fee from consolidated revenue. Each person is responsible for the first \$20 of any medical service, unless privately insured.

There has been no change to the subsidy of \$16 per occupied bed-day paid to private

hospitals, supplementary Commonwealth benefit payments to non-profit private hospitals under Section 34 of the Health Insurance Act, the reinsurance arrangements, health program grant payments and Commonwealth payments under the hospital cost sharing agreements.

#### *Administration*

Since 1 November 1978 the Health Insurance Commission's activities have been confined to the operation of Medibank Private, which operates in a similar way to private health insurance organisations.

The Department of Health is responsible for administering the Commonwealth medical benefit payments to the registered medical benefits organisations, bulk-billing arrangements, hospital payments and subsidies, nursing home benefits for persons without hospital insurance and health program grants.

#### **Nursing Home Benefits**

There are two forms of Commonwealth benefit payable in respect of patients accommodated in premises approved as nursing homes under the *National Health Act* 1953. These benefits are as follows:

##### (i) Basic Nursing Home Benefit.

Basic nursing home benefit is payable in respect of all qualified nursing home patients other than those patients who are eligible to receive benefits from a registered hospital benefits organisation or from some other source such as compensation, third party insurance etc. The amount of basic benefit payable varies between States on the basis of an amount which, when combined with the minimum patient contribution (as explained below), will fully cover the costs of seventy per cent of patients in non-Government nursing homes in each State. The benefit is reviewed and adjusted annually on this basis, the last such adjustment taking effect on 8 November 1979.

At 8 November 1979 the maximum amount of basic nursing home benefit payable per day in South Australia was \$20.55.

##### (ii) Commonwealth Extensive Care Benefit.

The Commonwealth extensive care benefit is payable at the rate of \$6 a day, in addition to the Commonwealth basic benefit, in respect of patients who need and receive 'extensive care' as defined in the National Health Act. As in the case of the Commonwealth basic benefit, the extensive care benefit is payable in respect only of qualified patients who are not entitled to receive such benefits from a registered hospital benefits organisation, workers' compensation or third party insurance.

Patients who are insured with a registered hospital benefits organisation receive all of their benefit entitlement, whether at the basic benefit or extensive care benefit levels, from that organisation and not from the Commonwealth. In all circumstances the amount of benefit payable by a hospital benefits organisation will be equivalent to the amount otherwise payable by the Commonwealth in respect of uninsured patients in nursing homes.

Generally, all nursing home patients are required to make a minimum contribution towards the approved nursing home fee charged. At 8 November 1979 it was \$7.85 a day.

Where the fees charged by a nursing home are in excess of the combined total of nursing home benefits plus the minimum patient contribution, the difference must be met by the patient. Conversely, where the nursing home fee is less than this combined total, the basic benefit (whether private health insurance benefit or Government benefit) is reduced by that amount.

### *Deficit Financing Arrangements*

As an alternative to the provision of patient benefits under the National Health Act (as outlined above), the *Nursing Homes Assistance Act* 1974 provides for an arrangement whereby the Commonwealth Government may meet the net operating deficits of religious and charitable nursing homes.

All organisations wishing to participate in the deficit financing arrangements must enter into a formal agreement with the Commonwealth Government for that purpose.

Commonwealth nursing home benefits as provided under the National Health Act are not payable to a nursing home during any period in respect of which that nursing home participates under the deficit financing arrangements and uninsured patients are charged only a prescribed fee equivalent to the minimum patient contribution. However, the usual arrangements, as for nursing homes approved under the National Health Act apply to insured patients and registered hospital benefits organisations pay the full normal benefit rate.

Under the Nursing Homes Assistance Act, funding is available for the provision of medical and paramedical services which are to be provided as outpatient services to a specified class of persons. Such services, where approved, are termed approved services and have to be provided in association with the provision of Nursing Home care at a nursing home approved under the Nursing Homes Assistance Act.

### *Domiciliary Nursing Care Benefit*

Since March 1973, the Commonwealth Government has provided a Domiciliary Nursing Care Benefit of \$2 per day to persons who provide continuous care for relatives or, in certain circumstances, patients other than relatives in a private home which is the usual residence of both the caring person and the patient.

Before 1 November 1979, this benefit was only payable to persons caring for aged chronically ill or infirm patients. From 1 November 1979, eligibility has been extended to include persons caring for chronically ill or infirm patients aged 16 years and over.

Patients in respect of whom the benefit is paid must be receiving adequate care from a registered nurse. A person cannot receive benefits for more than two patients at any one time. This benefit is not subject to a means test and is payable, under the National Health Act, in addition to any entitlements that persons may have under the *Social Services Act* 1947 or the *Repatriation Act* 1920 for pensions or other supplementary allowances.

### *Health Program Grants*

Health Program Grants are paid under Part IV of the Health Insurance Act to approved organisations for (a) Health Services Development Projects or (b) from 1 November 1978, the cost of Scheduled medical services provided to patients in respect of whom a doctor in private practice would bulk-bill *i.e.* pensioners with Pensioner Health Benefits cards and their dependants, and those patients classified by the doctor as disadvantaged who are not insured. Patients with private health insurance are charged the full Schedule fee.

The total amount paid to approved organisations in South Australia during the 1978-79 financial year was \$325 516.

### *Health Costs Incurred by Overseas Visitors to Australia*

Where the period of stay in Australia exceeds 6 months' duration, a person may be deemed to be an Australian resident for the purposes of Commonwealth medical and hospital benefits/cover, where that person qualifies in accordance with the definition of 'Australian resident'.

Where a period of stay is less than 6 months' duration, the Commonwealth benefits are generally not paid because the person involved is not deemed to be an Australian resident. Visitors to Australia are however, immediately eligible for Commonwealth nursing home benefits and pharmaceutical benefits on the same basis as Australian residents.

Where persons do not qualify for Commonwealth medical benefits it is difficult to arrange adequate health insurance cover. This is because the medical benefits tables have been constructed on the basis that Commonwealth medical benefits will also be payable. The maximum amounts of insurance medical benefits by themselves are not adequate to cover cost of medical services. Having regard to the effect of the non-payment of Commonwealth medical benefit, it is prudent for these visitors to Australia to make some other arrangement for health cover for their visit, such as taking out 'travellers insurance'.

It is possible to arrange adequate hospital benefits cover where the visitor would not qualify for free hospital care. The cover can be arranged by insuring in the normal hospital benefits tables operated by hospital benefits organisations. However, these organisations do impose a waiting period of two months (as do medical benefits organisations) before new members become entitled to benefits. In the case of obstetric patients seeking cover for benefits above the basic level, a waiting period of up to nine months may be imposed. To obtain immediate benefit cover on arrival in Australia, it is necessary to write to an Australian health insurance organisation and arrange for insurance to commence at least two months before the date of arrival in Australia.

#### **Pharmaceutical Benefits**

Under the Pharmaceutical Benefits Scheme certain medicines, when prescribed by a doctor, are made available to the general public upon the payment of \$2.75. Eligible pensioners are supplied free of cost. The drugs and medicinal preparations available as pharmaceutical benefits are determined on the advice of the Pharmaceutical Benefits Advisory Committee which also recommends the maximum quantities that can be prescribed. Pharmaceutical benefits are normally obtained through registered pharmacists.

**Pharmaceutical Benefits, South Australia<sup>(a)</sup>**

Year	Number of Benefit Prescriptions	Cost of Benefit Prescriptions			Additional Cost to Commonwealth Government (b)
		Total Cost	Patients Contributions	Net Cost to Commonwealth Government	
'000					
1974-75 ....	5 992	17 302	5 941	11 361	4 630
1975-76 ....	5 854	21 286	8 297	12 988	1 709
1976-77 ....	7 543	27 850	9 186	18 665	769
1977-78 ....	7 769	29 833	9 460	20 372	419
1978-79 ....	8 031	33 018	11 116	21 903	420

(a) Excludes pensioner benefits. Includes Northern Territory.

(b) Payments to hospitals and miscellaneous services.

#### **Anti-tuberculosis Campaign**

The national campaign to eradicate tuberculosis operated from 1948 to 1976. Under the

terms of the arrangements, the Commonwealth Government paid for all capital expenditure on tuberculosis projects and equipment, and reimbursed the State the proportion of maintenance expenditure incurred in the diagnosis, treatment and control of tuberculosis in excess of that amount borne by the State in 1947-48.

The Commonwealth Government pays allowances to people suffering from tuberculosis to encourage them to give up work and undergo treatment. The allowances paid to persons suffering from tuberculosis are subject to an income test.

At 31 December 1978 the maximum income permitted before allowances were affected was \$20 per week for a single person and \$17.25 for each married person.

#### Anti-tuberculosis Campaign, South Australia

Commonwealth Government Expenditure	1974-75	1975-76	1976-77	1977-78	1978-79
Allowances paid to sufferers .....	38	54	53	60	27
Maintenance expenditure (a) .....	1 114	685	(b) 498	39	—
Capital expenditure .....	31	30	—	—	—
Total .....	1 183	769	551	99	27

(a) Includes administrative expenses not paid from National Welfare Fund.

(b) Half-year only.

At 31 December 1979, the allowance payable to a married person and his spouse was \$50 a week each. In addition, an amount of \$7.50 a week was paid for each dependent child who was under sixteen years of age or undergoing full-time education and under twenty-five years of age. This amount was apportioned evenly between the sufferer and the spouse. A single person without dependants, if not hospitalised, received \$61.15 a week or, if receiving hospital treatment free of charge, \$57.90 a week. Widows or widowers with dependent children either under sixteen years of age or undergoing full-time education and under twenty-five years of age received \$61.90 a week, plus \$7.50 a week for each dependent child plus a mothers or guardians allowance of \$4 a week. An additional mothers or guardians allowances of \$2 a week was also paid where there was a dependent child under six years of age or a dependent invalid child requiring full-time care.

#### REPATRIATION BENEFITS

##### Disability Pensions

Disability pensions are paid by way of compensation to ex-servicemen and women who suffer incapacity because of war service, to their eligible dependants, and to the dependants of those whose death is related to service. Since 7 December 1972 serving members of the armed forces and eligible dependants have also been eligible for disability pensions if incapacity or death is related to defence service. There are four main classes of disability pensions.

The special (TPI) rate (\$110.90 a week from 1 November 1979) is payable to those who are deemed totally and permanently incapacitated.

The intermediate rate (\$76.35 a week from 1 November 1979) is payable to an ex-serviceman who, because of the severity of his service related incapacity, can work only part-time or intermittently and in consequence is unable to earn a living wage.

The general rate is payable to those who suffered service related disabilities but still retained some earning capacity. The pension payable depends on the degree of incapacity, the maximum from 1 November 1979 being \$41.85 a week. Pensions are also payable for a wife and each child under sixteen years of age under both special and general pensions. Student children also qualify.

The widows rate is payable to widows of ex-servicemen who died as a result of service, and to any children under sixteen years of age. An additional domestic allowance is payable to certain classes of widows. From 1 November 1979 the widows rate was \$57.90 a week and a domestic allowance \$12.

#### Disability Pensions, South Australia<sup>(a)</sup>

Year	Pensions in Force at End of Year			Expenditure
	Incapacitated Ex-servicemen	Dependants of Incapacitated Ex-servicemen	Dependants of Deceased Ex-servicemen	
Number				
1974-75 ....	18 726	23 545	4 866	47 137
1975-76 ....	18 246	22 406	4 762	45 414
1976-77 ....	17 910	21 340	4 676	43 926
1977-78 ....	17 452	20 409	4 651	42 512
1978-79 ....	16 993	19 467	4 576	41 035

(a) Includes Northern Territory.

#### Service Pensions

Service pensions are payable to ex-servicemen who served in a theatre of war and have reached the age of sixty years (fifty-five for women) or who are permanently unemployable. Before 2 November 1978, incapacity from pulmonary tuberculosis was also a basis of eligibility. The service pension is equivalent in amount to the social services age and invalid pensions and is subject to the same income test. It also confers eligibility for a full range of medical and dental treatment, provided the separate income limit for fringe benefits is not exceeded. The dependants of service pensioners may continue to receive their appropriate allowance upon the death of the pensioner. All service pensioners aged seventy years and over have received the pension free of the income test from 8 May 1975.

#### Service Pensions, South Australia<sup>(a)</sup>

Year	Pensions in Force at End of Year			Expenditure
	Ex-servicemen	Dependants of Pensioner Ex-servicemen	Dependants of Deceased Pensioners	
Number				
1974-75 ....	8 241	3 384	368	11 993
1975-76 ....	9 373	4 404	345	14 122
1976-77 ....	10 674	5 568	324	16 566
1977-78 ....	12 044	6 770	316	19 130
1978-79 ....	13 337	7 827	306	21 470

(a) Includes Northern Territory.

### Medical Services

The Department of Veterans' Affairs provides hospital treatment, general practitioner services, specialist facilities, pharmaceutical benefits, dental treatment, and nursing home benefits for eligible persons. A comprehensive rehabilitation and social worker service is also available. Medical treatment is provided for all service-related disabilities, pulmonary tuberculosis, and all forms of malignant cancers. Treatment for all non-service-related disabilities is made available to veterans receiving a disability pension at or above the 100 per cent general rate, veterans of the Boer and 1914-18 Wars, veterans who are ex-prisoners of war, veterans in receipt of service pensions (subject to income being within the limits governing the provision of free medical treatment and other fringe benefits), widows, and certain dependants of deceased male veterans whose deaths have been accepted as related to service.

In-patient and out-patient treatment is provided at the Repatriation General Hospital, Daw Park. Facilities at the Out-patient Department include radiological, pathological, physiotherapy, and chiropody services in addition to medical specialist examinations.

The Repatriation Artificial Limb and Appliance Centre, as well as attending to repatriation needs, provides appliances and services for other government departments and provides artificial limbs free of charge to all disabled members of the community.

### Department of Veterans' Affairs: Medical Services, South Australia<sup>(a)</sup>

Year	In-patients: Total Treated		Out-patients: Number of Visits		Pharma- ceutical Benefits
	Daw Park	Other Hospitals	Daw Park	Visits to or by Medical Officer	
1974-75 .....	6 107	935	76 849	189 087	\$ 1 699 990
1975-76 .....	5 794	897	76 197	187 901	2 300 005
1976-77 .....	5 738	270	76 847	174 023	2 344 959
1977-78 .....	5 543	334	76 224	170 627	2 462 517
1978-79 .....	5 835	2 649	76 048	180 618	2 562 799

(a) Includes Northern Territory.

### Education and Training

Assistance in education and training is provided, through the Department of Veterans' Affairs for children of ex-servicemen whose death, blindness or total and permanent incapacity is accepted as service-related. The Soldiers' Children Education Board guides and supervises the progress of children receiving such assistance.

### Other Services

Other assistance, through the Department of Veterans' Affairs, includes gift cars for certain disabled ex-servicemen, aids for blinded ex-servicemen and business re-establishment loans. Funeral grants of up to \$300 are paid on the death of certain ex-servicemen and dependants.

### ABORIGINAL ADVANCEMENT

By agreement with the South Australian Government on 1 December 1973 the Commonwealth Government assumed responsibility in relation to Aboriginal affairs policy, planning, financial administration, information and co-ordination. These functions are administered in South Australia by officers of the Department of Aboriginal Affairs in Adelaide and Port Augusta. The Commonwealth Government assists those Aboriginals who wish to integrate into white society. At the same time, the Government encourages self-management and preservation of the Aboriginal cultural heritage.

The policy of the Commonwealth Government is that, wherever possible, Aboriginal people should avail themselves of the normal facilities provided for the total community, for example, welfare, health and education, and the State or Commonwealth Government departments responsible for these functions will continue to provide such services. Where special additional programs are needed for Aboriginal people the Commonwealth Government will provide the finance to enable these to be carried out through the appropriate Government or voluntary agency, with the co-ordination of arrangements being handled by the Regional Director of the Department of Aboriginal Affairs. Funds in 1978-79 were also made available direct to eighty-seven Aboriginal organisations and communities within South Australia for 141 programs designed to develop Aboriginal self-management and achievement. Sixty-six Aboriginals were employed on seventeen Special Work Projects with an expenditure of about \$365 000. In addition, 195 Aboriginals were employed on Community Development Employment Projects at Ernabella and Fregon with an expenditure of about \$656 000.

The following table shows funding by the Department of Aboriginal Affairs on various aspects of Aboriginal advancement.

**Department of Aboriginal Affairs: Funding, South Australia**

Particulars	1976-77	1977-78	1978-79
<b>Direct Funds:</b>		Dollars	
Housing .....	962 287	890 300	957 700
Health .....	255 174	473 185	953 596
Education .....	637 000	752 500	604 226
Welfare .....	224 215	304 670	351 945
Community councils .....	1 752 201	1 942 767	2 370 858
Recreation .....	29 000	29 800	32 400
Legal aid .....	410 000	440 000	430 000
Employment .....	305 927	906 220	1 020 734
Enterprises .....	206 517	483 320	322 695
Training .....	—	—	245 900
Total .....	4 782 321	6 222 762	7 290 054
<b>State Grants:</b>			
Department for Community Welfare .....	446 140	439 500	559 000
Education Department .....	1 172 000	1 096 420	1 325 000
South Australian Housing Trust .....	2 800 000	1 600 000	1 994 000
Department of Further Education .....	284 860	331 000	440 600
Department of Public Health .....	1 151 000	1 204 500	1 340 000
South Australian Public Service Board ....	—	5 500	17 000
Total .....	5 854 000	4 676 920	5 675 600

Specific needs in education were met with the establishment, in 1973, of both the Aboriginal Community College, as part of Torrens College of Advanced Education (now part of the Adelaide College of the Arts and Education), and the Aboriginal Task Force at the South Australian Institute of Technology. The College provides remedial work-orientated training and self-development courses for Aboriginals who have had difficulty in maintaining work continuity. The Task Force is a community development training program which provides trained staff for Government departments handling aspects of Aboriginal Affairs and for Aboriginal communities themselves.

Aboriginal people decided in 1975 to set up the South Australian Woma Committee to

deal with prevention of alcohol abuse and rehabilitation. Since then, eight sub-committees have been set up in various parts of South Australia and all follow programs based on medical input and using therapy programs to change behaviour patterns.

The Commonwealth Government makes available funds for income-producing Aboriginal enterprises, such as tourist ventures, arts and crafts projects, and farming operations. The Aboriginal Housing Board is a predominantly Aboriginal body which makes policy and gives direction to the South Australian Housing Trust in relation to houses for Aboriginal tenants. The Trust acts as agent for the Board in purchasing, maintenance and rent collection.

The State Government, in 1974, set up the South Australian Aboriginal Advancement Committee to co-ordinate and overview all activities of State Departments providing a service to Aborigines. In 1979, the Committee changed its name to the South Australian Aboriginal Co-ordinating Committee to avoid confusion with the Aboriginals Advancement League, and because 'Co-ordinating' better describes its role and function. The Committee meets regularly, both in the city and in country towns or communities. It has a full-time chairman, and a staff of two.

### STATE WELFARE SERVICES

#### EXPENDITURE

The following table shows outlay by the State Government from Consolidated Revenue Account on various aspects of social security and welfare. For further details of the classifications in the table see Part 11.3 State Government Finance.

**Consolidated Revenue Account: Outlay on Social Security and Welfare, South Australia<sup>(a)</sup>**

Purpose	1974-75	1975-76	1976-77	1977-78
		\$'000		
General administration, regulation and research	5 762	8 080	8 242	10 186
Care of and assistance to:				
Aged persons .....	7 266	8 336	9 090	9 782
Incapacitated and handicapped persons ..	1 094	686	774	135
Unemployed and sick persons .....	459	15 458	7 166	24 480
Ex-servicemen .....	228	156	155	154
Widowed and deserted spouses .....	2 460	3 377	4 255	5 837
Families and children (b) .....	2 673	3 338	4 494	5 340
Other social security and welfare services:				
Services to Aborigines n.e.c. (c) .....	1 116	825	673	655
Other .....	268	537	522	1 042
<b>Total .....</b>	<b>21 326</b>	<b>40 793</b>	<b>35 371</b>	<b>57 611</b>

(a) Charges for goods and services supplied have been excluded from receipts and deducted in calculating outlay.

(b) Excludes reformatory institutions.

(c) Includes only programs designed to meet specific needs of persons of Aboriginal descent.

### COMMUNITY WELFARE

Community Development Boards have been established in local government areas with a wide and representative membership to encourage and assist people to become more involved in the life of their local community. The Boards also promote the development of links and co-operation between organisations and groups within the local community. They are responsible to the local government authorities.

The Department for Community Welfare promotes the general well-being of the community, encourages the welfare of the family as the basis of community welfare,

promotes co-ordination of services and collaboration among various agencies and promotes research, education and training in community welfare.

The Community Welfare Act provides for the establishment of community welfare centres or district offices at selected locations throughout the State and the full range of the Department's services is available from these centres. District offices have been established at Adelaide, Amata, Berri, Campbelltown, Ceduna, Christies Beach, Coober Pedy, Elizabeth, Enfield, Glenelg, Indulkana, Kadina, Leigh Creek, Mitcham, Modbury, Mount Gambier, Murray Bridge, Norwood, Nuriootpa, Port Adelaide, Port Augusta, Port Lincoln, Port Pirie, Salisbury, 'The Parks' area, Woodville and Whyalla, and branch offices at Clare, Gawler, Henley Beach, Hillcrest, Hindmarsh, Ingle Farm, Kangaroo Island, Maitland, Marion, Millicent, Morphett Vale, Naracoorte, Oodnadatta, Peterborough, Renmark, Stirling, Taperoo, Thebarton, Unley, Waikerie, Woodside and Victor Harbor.

The decentralisation program has led to a new sense of involvement in the community and its many welfare needs. There is greater flexibility and opportunity to support local efforts to provide new services for youth, the aged, single parents and others in need.

The Department for Community Welfare's library has one of the most comprehensive collections in Australia on social welfare and related topics, and is used by staff, tertiary students, and other people in contact with the Department.

The Department has developed and extended its ties with Commonwealth and other State Government departments and with local government and voluntary bodies. A Community Welfare Grants Advisory Committee, established in 1972, recommends grants to assist voluntary community welfare organisations with both capital and operating costs. During 1978-79 \$965 000 was provided in grants to over 500 organisations..

Neighbourhood Youth Workers help local people learn the skills and develop the resources to establish a wide variety of activities for young people. The Duke of Edinburgh's Award scheme in South Australia provides a wide range of activities for the personal development of young people.

A special 24-hour emergency service in the Adelaide metropolitan area helps in personal and family crises. This service works in close co-operation with the Police Department. Crisis Care workers especially trained to help people under stress, provide on-the-spot assistance to individuals and families, and cars fitted with two-way radios ensure prompt attention, where necessary.

A Budget Advice service operates from thirty-two locations to help people manage their budgets, re-arrange debts and plan their spending.

#### Care and Supervision of Children

Under the Children's Protection and Young Offenders Act, 1979 the emphasis is on the welfare and rehabilitation of young offenders, together with the adequate protection of the community.

Any child up to the age of eighteen may be dealt with as neglected or uncontrolled and those up to the school leaving age may be charged with truancy. Offenders dealt with are between the ages of ten and eighteen years. The Children's Court may place the child under the care and control of the Minister of Community Welfare or on a bond. He may be placed under the supervision of a departmental officer or may be obliged to attend at a youth project centre as a condition of the bond. Either of these court orders results in Departmental help for the child for the period set by the Court.

Some children under the care and control of the Minister are placed in departmental homes or centres for care, treatment and training. Many are placed with their parents or with foster parents, or in other substitute care under the supervision of a community welfare worker.

The Youth Project Centre, Magill, provides intensive non-residential treatment facilities for young offenders. The Norwood Project Centre helps children who are referred with learning and behavioural difficulties. The Northern Suburbs Project Team provides a similar service to schools and departmental district offices in the north-western metropolitan areas.

The Intensive Neighbourhood Care scheme, implemented in 1979, provides personal care for young offenders who do not need secure care; they live with specially selected and trained families.

Children's Aid Panels provide a non-judicial setting in which to deal with children who are alleged to have committed an offence or to be truants. Each panel is constituted of a Police Officer and a departmental Social Worker. Panels sit at all district office locations of the Department.

#### *Children's Court Services*

Officers from the Department for Community Welfare appear in all major Children's Courts to present reports and help Courts to reach a decision in the best interests of the child.

Children's Courts officers also represent the Department in the prosecution of neglected and uncontrolled charges when necessary. They protect the interests of children under the guardianship of the Minister when these children appear in court.

#### *Residential Care*

During 1978-79 the Department instigated a re-organisation of its community-based residential care facilities. The new system provides each metropolitan region with a regional admission unit for short-term crisis care, assessment and outreach for teenage offenders and a regional group home for teenage offenders who need therapeutic care. The changes have provided greater staffing resources in the areas of most need.

Details of the number of children committed to the care and control of the Minister of Community Welfare are given in the following table.

**Children Placed under Care and Control for the First Time, Year Ended 30 June 1979**

Particulars	Males	Females	Total	Percentage of Total
	Number			Per cent
<b>From the Children's Courts:</b>				
Offenders .....	131	28	159	52.0
Neglected .....	16	11	27	8.8
Uncontrolled .....	4	10	14	4.6
Habitually absent from school .....	2	4	6	2.0
In default of fine .....	50	4	54	17.6
<b>Admitted under Community Welfare Act (Child is in danger of becoming):</b>				
Neglected .....	19	10	29	9.5
Uncontrolled .....	1	—	1	0.3
Transfer of control (Interstate) .....	8	8	16	5.2
<b>Total .....</b>	<b>231</b>	<b>75</b>	<b>306</b>	<b>100.0</b>

NOTE: In addition to the above, there were 186 children (90 boys and 96 girls) admitted to the temporary care and control of the Minister of Community Welfare. During the year 211 children in short-term care (103 boys and 108 girls) were released, when the short-term need for assistance had ceased.

At 30 June 1979, there were 1 561 children under the care and control of the Minister of Community Welfare of whom 153 were in departmental homes and centres and 1 408 were not in institutions.

The centres under the control of the Department include SA Youth Training Centre for older youths, who have been committed for residential training or assessment by a Children's Court following an offence, and the South Australian Youth Remand and Assessment Centre (in the former Vaughan House building) which provides for girls, generally from twelve to eighteen years, and (since 1 September 1978) for boys from ten to fifteen years. Until 1 September 1978, Brookway Park provided residential training or assessment for boys between ten and fifteen years.

Lochiel Park is a training centre for boys, generally between the ages of fourteen and eighteen years, who are slightly mentally retarded and under care and control of the Minister. In addition, cottage and family homes provide a family-like atmosphere for small groups of boys and girls.

In addition, there were 971 children placed on bonds requiring supervision by Departmental officers during 1978-79 and the total number of such children at 30 June 1979 was 803 (680 boys and 123 girls).

The importance of keeping a child in his own home whenever possible cannot be over-emphasised and children are placed out of departmental homes and centres as soon as possible. Review boards consider the social background of each child under care and control and make recommendations regarding action to be taken for the child's benefit and welfare.

When a child is returned to his own home from an alternative placement, support is continued to the whole family through counselling, motivation of self-help programs, and through the full utilisation of appropriate resources throughout the Department and the community. The same services of a community welfare worker are available to all children under care and control or on bonds with supervision as well as to other families in the community seeking help.

Other responsibilities of the Department's welfare workers include the investigation of allegations that children are neglected, ill-treated or uncontrolled, and the counselling of youths and children voluntarily referred to departmental officers. Departmental welfare workers are also appointed as attendance officers under the Education Act to assist in the prevention of school truancy. Medical and other specialists including psychologists are employed within the Department.

#### Licensing of Foster Parents and Children's Homes

Under the Community Welfare Act, 1972-1979 every foster parent caring for a child under the age of fifteen years must be approved by the Director-General of Community Welfare, who is responsible for each child's welfare. Departmental officers visit such homes regularly.

Consultant and licensing services are also provided for child care, family day care and baby-sitting agencies. Family Day Care Co-ordinators are working in thirteen districts.

The Department is responsible for licensing non-statutory children's homes in which more than 5 children under the age of eighteen are cared for apart from their parents or near relatives. Recommendations concerning approval, residential care practice, standards and funding of children's homes are made by the Residential Child Care Advisory Committee comprising four Government and four non-statutory agency members appointed by the Minister.

### Joint Departmental Projects for Early Childhood Services

At Mansfield Park and Ferryden Park there are joint Department for Community Welfare and Education Department projects combining family day care with pre-school and child-parent programs; at Campbelltown, Brompton, Nangwarry and Thebarton both Departments in co-operation with local groups provide Child Care, Resource Centre and Pre-School facilities.

Together with the Health Commission, both Departments operate integrated resource services in Elizabeth West, Alberton and Christies East. Mobile toy libraries operate in three areas as a joint venture with the Kindergarten Union.

In 1976 the Community Welfare Act was amended to require additional classes of persons to report suspected cases of non-accidental physical injury to children. Six regional panels have been set up in South Australia which aim to minimise both the number of cases occurring, and their severity.

### Adoptions

South Australia has had an Adoption of Children Act since 1925, the current legislation being the Adoption of Children Act, 1966-1978. Under this Act the interests of the children are considered paramount. The right to place children for adoption is restricted to the Director-General of Community Welfare or to private adoption agencies which the Director-General has approved. The adoptive parents, who must be approved by the Director-General, become the legal parents after the adoption order is made by an Adoption Court (usually about six months after placement).

Adoptions made in other Australian States are recognised in South Australia; similarly South Australian adoptions are recognised in the other States. A more detailed account of the South Australian legislation was included on pages 221-4 of the *South Australian Year Book 1968*.

There are two types of adoptions:

- (1) adoptions where a child surrendered by its natural parent(s) is placed with approved adoptive parents and the identity of either party is kept secret;
- (2) adoptions where the identity of one or both parties is disclosed, mainly the adoption of children by step-parents but also including adoptions by relatives, foster parents and children from other countries (inter-country adoptions).

On 10 August 1978 new regulations came into effect which provide criteria for the selection of people wishing to adopt Australian children: these criteria are based on recommendations of the Community Welfare Advisory Committee on adoption matters.

The following table refers to all types of adoption where the Court order has been finalised during the financial years shown.

**Number of Adoptions, South Australia**

Age of Child (a)	1974-75	1975-76	1976-77	1977-78	1978-79(b)
Under one year .....	271	227	195	141	120
One year and under two .....	47	73	42	71	47
Two years and under six .....	112	96	216	132	83
Six years and under thirteen .....	92	100	160	123	109
Thirteen years and under sixteen ....	11	15	24	15	18
Sixteen years and over .....	18	38	21	24	28
Total .....	551	549	658	506	405

(a) At date of adoption order. (b) Excludes ten adoptions where the prospective adopting parents applied directly to the court for an adoption order and the Department for Community Welfare has no details.

The next table gives, for the two types of adoption, the number of adoption orders granted, the number of applications and the number of children placed during the financial year. The number of children placed does not include children adopted by step-parents or relatives *i.e.* those situations where an agency has not actively arranged the placement of the child.

Adoptions, South Australia

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
<b>Number of adoptions granted:</b>					
Identity not disclosed .....	323	305	222	164	146
Particular person—identity known .....	228	239	285	219	213
Inter-country .....	—	5	151	123	56
Total .....	551	549	658	506	415
<b>Number of applications received:</b>					
Identity not disclosed .....	639	476	326	300	224
Particular person—identity known .....	291	305	340	373	335
Inter-country .....	366	220	161	135	100
Total .....	1 296	1 001	827	808	659
<b>Number of children placed (a):</b>					
Australian born .....	275	239	189	153	160
Inter-country .....	138	60	60	50	25
Total .....	413	299	249	203	185

(a) The average waiting time for a child to be placed varies from year to year depending on the number of applicants and the number of children surrendered.

### Inter-Country Child Care Branch

The Department for Community Welfare established the Inter-Country Child Care Branch in 1977 with the following functions:

- (a) to provide information and publicity on how people of South Australia can give support to deprived children in other countries and how they can give financial and other help through existing sponsorship schemes;
- (b) to facilitate inter-country adoptions and advise on the issues involved; and
- (c) to arrange temporary care for children needing medical treatment or other care not readily available in their own country.

The Department is prepared to endorse suitable aid programs for deprived children in other countries and to refer requests of potential donors to those agencies which are known to the Department to function effectively and efficiently.

### Legal Services

Prosecutions for neglected, ill-treated and uncontrolled children are carried out by officers of the Department for Community Welfare who may also appear in Court where State children are involved. The Department assists by providing reports on the social background of children whose cases are considered by the Courts.

The Department provides a free legal service to deserted wives and other persons with maintenance, matrimonial and domestic problems. Officers interview and advise wives and husbands and negotiate with other parties and solicitors for settlements.

When necessary the officers institute legal proceedings and appear in Court on behalf of those seeking assistance to obtain Orders for separation, custody of children, access and maintenance. The Department does not take action for divorce. Some 2 300 maintenance payments are collected and paid weekly to deserted wives by the Department. Assistance is given to unmarried mothers in affiliation cases.

#### **Financial Assistance**

The Director-General for Community Welfare may, subject to any directions of the Minister, provide assistance to families or individuals in need. The assistance may be provided in the form of money or commodities or the provision of other services which will promote the welfare of the family or individual.

During 1978-79 financial assistance was issued to 19 100 applicants, representing 45 950 persons. The gross cost of assistance issued was \$9 717 009.

The Department provides residential care in a home at Magill for aged people in special need, most of whom are pensioners. The daily average occupancy of the Magill home was 102 during 1978-79.

#### **Rates Remission Scheme**

A remission of rates and taxes scheme for pensioners and others able to demonstrate exceptional circumstances of hardship is operated by the State Government. The scheme provides for a remission of up to 60 per cent of the cost of water and sewerage rates, land tax and council rates charged on dwellings, including flats and units owned and occupied by eligible applicants. Pensioners receive a direct remission from the rating authority on application. Applications from non-pensioners are processed by the Department and in 1978-79, 3 328 claims totalling \$127 066 were approved. The total cost of remissions by all authorities was met by the Department and totalled \$8 954 627 for 1978-79 in the following categories:

	\$
Land tax .....	574 369
Water, sewerage .....	4 087 882
Local government .....	4 165 310
Remissions to non-pensioners .....	127 066

#### **Aboriginal Lands Trust**

The Aboriginal Lands Trust was established by the South Australian Government in 1966 to hold the permanent freehold titles of existing Aboriginal Reserves, together with the titles to other land which would be purchased in future years for the use of Aboriginal people.

The Trust carries out its work on behalf of all Aboriginal people in South Australia and is completely independent of the Government.

Currently, policy of the Trust is to act essentially as a land title holding body only and to lease its land and assets to Aboriginal communities, organisations and individuals without interference in the running or use of those properties.

Communities incorporated under the Associations Incorporation Act have an elected council. Advisory and/or managerial staff are appointed according to the degree of control and management responsibility accepted by the community.

In March 1979, the South Australian Government set up a working party to examine the Aboriginal Lands Trust Act, 1966-1975. It was established to examine the system of land acquisition and holding, the functions of the Trust and the number and method of appointing members. It was also charged with reviewing provisions of the Act in respect of mining on lands held by the Trust.

### PRIVATE WELFARE SERVICES

There are numerous charitable and benevolent organisations working within South Australia. A large proportion of these derive revenue from regular donations, subscriptions and income from bequests; nearly all derive revenue from special functions. A number also receive Commonwealth, State or local government grants. The Collections for Charitable Purposes Act, 1939-1947, requires the registration of charitable organisations before they may actively solicit funds.

Organisations which have a wide range of activities include the Australian Red Cross Society, Marriage Guidance Council, Service to Youth Council, the welfare bureaux and missions of the various churches, and organisations catering for ex-servicemen and their dependants. Most of these agencies maintain full-time staff and generally employ professional social workers. Other organisations cater for more specific needs, covering a wide range of physical and sociological disabilities. This includes the care of physically and mentally handicapped persons such as crippled children, the blind, deaf-mutes and alcoholics; also of specific groups such as aged persons, Aborigines and migrants. Many of these organisations depend largely or entirely on voluntary aid.

For details of the numerous bodies concerned with social welfare, reference should be made to the *Directory of Social Welfare Resources* published jointly by the South Australian Council of Social Services and the Citizens Advice Bureau. For those in need, the Citizens Advice Bureau advises on how to benefit from and how to use wisely the many services provided by the Commonwealth and State Governments and the various voluntary organisations.

### REGISTERED MEDICAL AND HOSPITAL BENEFIT ORGANISATIONS

In 1953 Australia introduced a system of voluntary health insurance supervised and financially supported by the Commonwealth Government. Medical benefits and full hospital benefits are payable to members of a registered organisation. In most cases both medical and hospital benefits were provided by the one organisation.

The contributions (premiums) payable to hospital benefits organisations depend on the scale of fund benefits required. Contribution rates to medical and hospital organisations may vary slightly between funds, and single and family rates are available.

**Registered Medical Organisations, South Australia**

Particulars	Unit	Eight Months Ended 30 June 1979 (a)
Basic benefits coverage (b):		
Registered organisations (c) (d) .....	No.	5
Membership (d) .....	'000	369
Estimated persons covered (d) .....	'000	951
Basic benefits table (e):		
Number of schedule services .....	'000	401
Cost of schedule services .....	\$'000	5 637
Fund benefit paid .....	\$'000	1 595
Ancillary fund benefit paid .....	\$'000	11 538

**Registered Medical Organisations, South Australia (continued)**

Particulars	Unit	Eight Months Ended 30 June 1979 (a)
<b>Eligible pensioners (f):</b>		
Persons not medically insured;		
Number of schedule services	'000	62
Cost of schedule services	\$'000	959
Commonwealth benefit paid	\$'000	856
<b>Others (f):</b>		
Persons not medically insured;		
Number of schedule services	'000	251
Cost of schedule services	\$'000	3 180
Commonwealth benefit paid	\$'000	1 842
<b>Total (f):</b>		
Persons not medically insured;		
Number of schedule services	'000	314
Cost of schedule services	\$'000	4 139
Commonwealth benefit paid	\$'000	2 698

(a) In respect of services rendered on and after the introduction of the new health insurance arrangement on 1 November 1978.

(b) Sum of Basic Benefits Table and Optional Benefits Table — Full Cover.

(c) Medical benefits organisations whose State of registration under the National Health Act is South Australia.

(d) At 30 June 1979.

(e) The Basic Medical Benefits table covers 75 per cent (40 per cent Commonwealth benefit plus 35 per cent fund benefit) of the Medical Benefits Schedule Fee or the Medical Benefits Schedule Fee less \$10 whichever is the greater, in respect of fees charged by medical practitioners, certain dentists and participating optometrists for services specified in the Medical Benefits Schedule.

(f) As from 1 November 1978 Commonwealth financed medical benefits have been available to all persons without medical insurance for Schedule services. These benefits are paid by the registered medical benefits organisations on behalf of the Commonwealth. The rate of benefit is 40 per cent of the Schedule fee with a maximum patient contribution of \$20 for any one service when the Schedule fee is charged except in the case of pensioners (and their dependants) with PHB entitlement. The rate of benefit in respect of these persons is 85 per cent of the Schedule fee with a maximum patient contribution of \$5 for any one service where the Schedule fee is charged. Excludes statistics in respect of the direct (bulk) billing arrangements.

**Registered Hospital Organisations, South Australia<sup>(a)</sup>**

Particulars	Unit	Year Ended 30 June 1979
<b>Basic benefits table:</b>		
Membership .....	'000	2
Hospital benefit days .....	'000	285
Nursing home benefit days (b) (c) .....	'000	328
Basic .....	'000	552
Extensive .....	'000	324
Professional service days .....	'000	28
Outpatient services .....	'000	6
Hospital benefit paid .....	\$'000	13 366
Nursing home benefit paid .....	\$'000	6 682
Basic .....	\$'000	9 789
Extensive .....	\$'000	1 945
Total .....	\$'000	11 734
Professional service benefit paid .....	\$'000	561
Outpatient benefit paid .....	\$'000	32

(a) Payments under the Reinsurance Arrangements which cover those people whose periods of hospitalisation exceed 35 days in one year, are shown in this table. (b) Since 1 October 1977, all payments by registered hospital benefits organisations in respect of nursing home patients have been made under the Reinsurance Arrangements. (c) The number of days for which basic benefit is paid includes the number of extensive days.

Registered Hospital Organisations, South Australia<sup>(a)</sup>

Particulars	Unit	Year Ended 30 June 1979 (b)
Registered organisations (c) (d) .....	No.	8
Membership (d) .....	'000	372
Estimated persons covered (d) .....	'000	933
Basic benefits table:		
Hospital benefit days (e) .....	'000	854
Nursing home benefit days .....	'000	1
Professional service days (f) .....	'000	139
Outpatient services (g) .....	'000	268
Hospital benefit paid (e) .....	\$'000	34 064
Nursing home benefit paid .....	\$'000	8
Professional service benefit paid (f) .....	\$'000	2 788
Outpatient benefit paid (g) .....	\$'000	1 342
Supplementary fund benefit paid .....	\$'000	10 197
Ancillary fund benefit paid .....	\$'000	429

(a) Excluding payments made under the Reinsurance Arrangements.

(b) Benefit payments by registered hospital benefit organisations for hospital services received after the introduction of the modified health insurance arrangements on 1 October 1976 and for nursing home services received between 1 October 1976 and 1 October 1977 when new nursing home arrangements were introduced.

(c) Hospital benefit organisations whose State of registration under the National Health Act is South Australia.

(d) At 30 June 1979.

(e) In respect of hospital benefits paid under basic benefits tables at the rate of \$40 per day, or the daily fee charged, whichever is the lesser, for hospitalisation in approved hospitals.

(f) Where a privately insured person in a recognised hospital receives medical services exclusively from medical practitioners employed by, or under arrangements made by, the hospital, a professional service charge of \$20 per day was raised. This charge is met by professional service benefit, and is additional to the daily bed charges raised.

(g) Outpatient benefit is payable in respect of charges raised for outpatient services by approved hospitals, and is equal to the fee actually charged, or the fee charged by recognised hospitals in the State of service, whichever is the lesser. South Australian recognised hospitals started to raise charges for outpatient services from 1 July 1977.

## FRIENDLY SOCIETIES

Friendly Societies are mutual organisations paying medical, hospital and other benefits to members and dependants in time of need. These societies are required to register under the Friendly Societies Act, 1919-1975. The Act is administered by the Chief Secretary through the Public Actuary who approves the table of contributions, the level of benefits and generally sees that the societies' rules and practices are in accordance with the law. A number of Friendly Societies are registered to pay Commonwealth Government medical and hospital benefits (see previous section), while others re-insure such benefits through a society created for this purpose.

Other benefits offered by some of the societies include sickness, funeral, dental, optical, pharmaceutical and physiotherapy benefits. Small loans and endowment assurance is also available. The Friendly Societies Act requires that separate funds be maintained for each of these benefits and members may contribute for all or for only a selection of benefits. However, a person is considered to be a full benefit member only if he contributes for sick pay and funeral benefits regardless of contributions for other benefits.

The level of benefits paid varies between societies, with sickness benefits generally on a declining scale as the period of illness lengthens. The Friendly Societies Act limits to \$4 000 any payment for endowment or funeral benefits and to \$21 any weekly payment to members for sickness or superannuation.

## Friendly Societies, South Australia

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Number of registered societies (a) .....	13	12	12	11	11	10
Number of members (a) (b) .....	50 664	50 779	49 888	48 057	45 815	43 051
Revenue (c):			\$'000			
Contributions and levies .....	12 198	15 023	21 626	18 805	39 802	48 068
Interest, dividends and rent .....	1 311	1 496	2 000	2 242	3 061	3 676
Other .....	2 726	3 120	5 179	5 015	3 268	635
Total revenue .....	16 235	19 638	28 805	26 063	46 132	52 379
Expenditure (c):						
Sick pay .....	173	158	156	150	134	124
Medical attendance and medicine .....	4 401	4 981	7 435	4 472	15 386	30 487
Sums payable at death ..	142	143	150	167	175	170
Hospital benefits .....	8 432	10 045	14 567	11 597	15 864	18 269
Administration .....	1 793	2 149	2 883	3 317	4 709	5 851
Other .....	613	571	644	2 508	754	1 351
Total expenditure .....	15 554	18 047	25 835	22 212	37 022	56 252
Total funds .....	22 865	24 456	27 426	31 277	40 387	36 499

(a) At 30 June.

(b) Full benefit members; does not include those who contribute for medical and hospital benefits only.

(c) Receipts and payments of Commonwealth Government medical and hospital benefit subsidies excluded.

The Friendly Societies' Medical Association Incorporated operates thirty pharmacies in the metropolitan area and one at Port Pirie where medicines are dispensed for Friendly Societies' members at concession prices. The United Friendly Societies' Dispensary Inc. operates a shop at Mount Gambier.

The Friendly Societies Act also prescribes the nature of assets which societies may hold. Their most important investment is in property mortgages and in particular in housing loans to members. They may also invest in government securities.

## 6.7 MARRIAGE

Registration of marriage has been compulsory in South Australia since 1842 when Acts 'for regulating Marriages in the Province of South Australia' and 'for registering Births, Deaths and Marriages in the Province of South Australia' were passed. The present legislation relating to marriages is the Commonwealth *Marriage Act* 1961 which came into full operation on 1 September 1963 superseding, in South Australia, the Marriage Act, 1936-1957.

The Principal Registrar of Births, Deaths and Marriages in South Australia carries out the statutory duties under the Act and has supervision over ministers of religion (as regards their duties under the Marriage Act), the District Registrars appointed to the twenty-two registration districts, and other persons authorised to perform marriages.

After a marriage the celebrant is required to forward the official certificate of marriage to the Principal Registrar who maintains at his office a register of all marriages celebrated

in South Australia. In addition, a copy of the marriage certificate is forwarded by the office of the Principal Registrar to the District Registrar who maintains a register of the marriages celebrated in his district.

The total marriages and marriage rates for selected years from 1846 are shown in the Statistical Summary, Appendix A. Particulars relating to first marriages, remarriages and crude marriage rates for the last five years are shown in the following table. The crude marriage rate rose throughout the sixties from 6.99 in 1960 to 9.38 in 1970, gradually declined to a level of 8.72 in 1974 and fell substantially to 7.86 in 1975. The 1976 rate of 8.64 coincided with the introduction of the Family Law Act and a substantial increase in the number of divorced persons remarrying. However, rates for 1977 (7.93) and 1978 (7.61) indicate a continuation of the decline apparent from the beginning of the decade. The crude marriage rate does not take into account changes over time in the age distribution of the population. Influences underlying the increase during the sixties include the upsurge of births immediately following the 1939-45 War, together with the effects of post-war immigration.

#### Previous Marital Status of Persons Marrying, South Australia

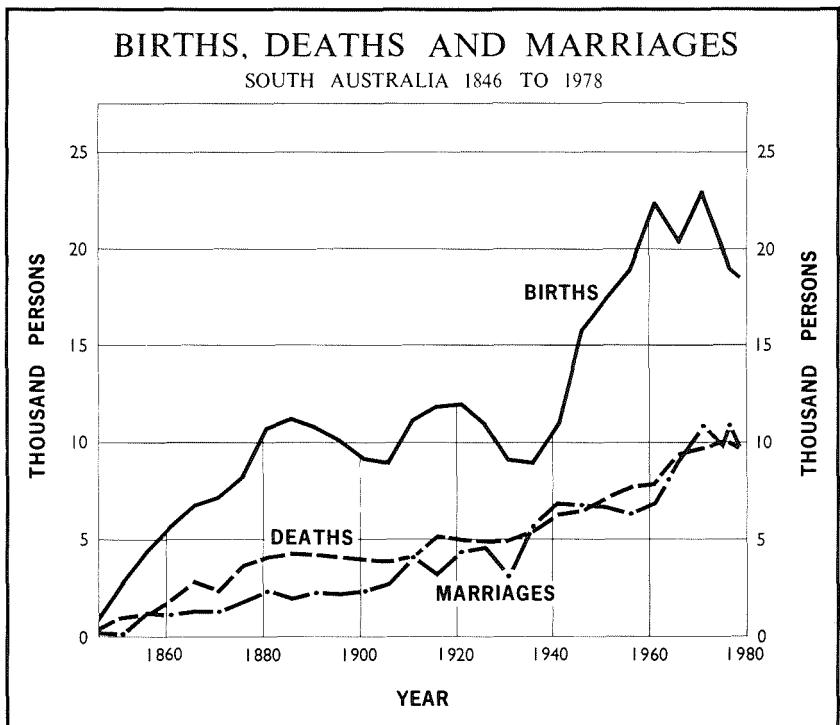
Year	Bridegrooms			Brides			Total Marriages	Rate (a)
	Bachelor	Widower	Divorced	Spinsters	Widow	Divorced		
1974 .....	9 538	353	878	9 560	388	821	10 769	8.72
1975 .....	8 504	297	1 042	8 571	336	936	9 843	7.86
1976 .....	8 515	391	1 996	8 659	459	1 784	10 902	8.64
1977 .....	7 672	334	2 120	7 863	398	1 865	10 126	7.93
1978 .....	7 515	297	1 988	7 622	348	1 830	9 800	7.61

(a) Per 1 000 of mean population.

Since 1970 the absolute number of both brides and bridegrooms marrying for the first time has declined, particularly marked decreases occurring in 1975 and 1977. From 1974 to 1978 the number of marriages between bachelors and spinsters declined from 9 045 to 6 745 (from 84.0 to 68.8 per cent of all marriages). However, over the period 1970 to 1975 the number of divorced persons remarrying rose substantially, bridegrooms by 65 per cent and brides by 66 per cent. Between 1975 and 1976 the increase in numbers of divorced persons re-marrying was 91.6 per cent for bridegrooms and 90.6 per cent for brides; in 1977 the increase was 6.2 per cent and 4.5 per cent for bridegrooms and brides respectively. In 1978 the proportion of marriages involving at least one divorced person to all marriages was 28.6 per cent, compared with 29.0 per cent in 1977, 25.8 per cent in 1976 and 15.7 per cent in 1975.

#### Age at Marriage and Previous Marital Status, South Australia, 1978

Age	Previous Marital Status								
	Bridegrooms				Brides				
	Bachelor	Widower	Divorced	Total	Spinsters	Widow	Divorced	Total	
Under 20 years .....	480	—	—	480	2 382	—	—	2 382	
20-24 years .....	4 455	1	74	4 530	4 041	6	227	4 274	
25-29 years .....	1 865	6	419	2 290	868	16	484	1 368	
30-34 years .....	440	14	501	955	209	17	431	657	
35-39 years .....	135	14	311	460	62	23	255	340	
40-44 years .....	48	10	241	299	19	24	189	232	
45 years and over .....	92	252	442	786	41	262	244	547	
All ages .....	7 515	297	1 988	9 800	7 622	348	1 830	9 800	



During 1978 the median age (that age at which one half of the total number of persons are below the age and the other half exceed it) of persons marrying for the first time was 23.5 years for bachelors and 21.2 years for spinsters, a difference of 2.3 years. The following table shows median ages for the last five years of all persons marrying, classified by marital status at the time of marriage.

**Median Age at Marriage and Previous Marital Status, South Australia<sup>(a)</sup>**

Year	Median Age of Bridegrooms (Years)				Median Age of Brides (Years)			
	Bachelor	Widower	Divorced	Total	Spinster	Widow	Divorced	Total
1974	22.9	59.4	35.4	23.4	20.7	53.1	33.6	21.1
1975	22.9	59.3	35.2	23.6	20.7	52.8	32.0	21.2
1976	23.2	58.2	35.5	24.4	20.9	50.9	32.3	21.8
1977	23.3	60.8	35.0	24.7	21.0	52.4	31.8	21.9
1978	23.5	61.3	35.0	24.9	21.2	53.6	32.0	22.2

(a) The term 'median age' refers to that age which divides total age distribution into two parts of equal magnitude.

The following table highlights the tendency for brides to marry bridegrooms older than themselves. Although the age difference has narrowed generally over the past decade, this phenomenon, together with the greater life expectancy of females compared to males as shown in the table on page 144, tends to perpetuate the predominance of aged widows over widowers within community and welfare institutions.

### Relative Age Differences of Parties to Marriage, South Australia

Elder Partner of Marriage	Number of Marriages			Proportion of Total Marriages		
	1976	1977	1978	1976	1977	1978
Per cent						
Bridegroom:						
8 years or more .....	1 347	1 288	1 201	12.4	12.7	12.3
7 years .....	364	326	317	3.3	3.2	3.2
6 years .....	482	492	483	4.4	4.9	4.9
5 years .....	689	621	622	6.3	6.1	6.3
4 years .....	947	882	851	8.7	8.7	8.7
3 years .....	1 239	1 192	1 116	11.4	11.8	11.4
2 years .....	1 547	1 414	1 336	14.2	14.0	13.6
1 year .....	1 513	1 397	1 314	13.9	13.8	13.4
Bride:						
1 year .....	618	539	534	5.7	5.3	5.4
2 years .....	322	319	269	3.0	3.2	2.7
3 years .....	206	167	202	1.9	1.6	2.1
4 years .....	166	136	144	1.5	1.3	1.5
5 years or more .....	392	372	400	3.6	3.7	4.1
No age difference .....	1 070	981	1 011	9.8	9.7	10.3
Total .....	10 902	10 126	9 800	100.0	100.0	100.0

### MARRIAGE RITES

The number of marriages performed by civil officers in South Australia during the decade from 1960 to 1969 accounted for 10.9 per cent of all marriages but reached a record level of 33.1 per cent in 1978. The increase in civil ceremonies during the 1970s is evident from the following table, and can partly be accounted for by the improved facilities now provided at the office of the Principal Registrar of Births, Deaths and Marriages.

### Marriages: Marriage Rites, South Australia

Rites	Number of Authorised Celebrants January 1978	Number of Marriages			Proportion of Total Marriages		
		1976	1977	1978	1976	1977	1978
<b>Denomination:</b>							
Baptist .....	71	289	240	247	2.7	2.4	2.5
Catholic .....	245	1 824	1 656	1 556	16.7	16.4	15.9
Church of England .....	207	1 468	1 236	1 195	13.5	12.2	12.2
Churches of Christ .....	74	278	288	271	2.6	2.8	2.8
Congregational (a) .....	..	288	106	..	2.6	1.0	..
Lutheran .....	146	584	544	539	5.4	5.4	5.5
Methodist (a) .....	..	2 083	1 079	..	19.1	10.7	..
Orthodox .....	22	166	165	162	1.5	1.6	1.7
Presbyterian (b) .....	..	266	143	..	2.4	1.4	..
Presbyterian (c) .....	7	..	13	21	..	0.1	0.2
Salvation Army .....	39	57	79	67	0.5	0.8	0.7
Uniting Church .....	294	..	1 051	2 160	..	10.4	22.0
Other denominations .....	211	300	285	340	2.7	2.8	3.5
Total .....	1 316	7 603	6 885	6 558	69.7	68.0	66.9

Marriages: Marriage Rites, South Australia (*continued*)

Rites	Number of Authorised Celebrants January 1978	Number of Marriages			Proportion of Total Marriages			
		1976	1977	1978	1976	1977	1978	
<b>Denomination:</b>								
<b>Civil Ceremonies by:</b>								
State Officers .....	30	3 018	2 845	2 476	27.7	28.1	25.3	
Other Civil Celebrants .....	18	281	396	766	2.6	3.9	7.8	
Total .....	1 364	10 902	10 126	9 800	100.0	100.0	100.0	

(a) Figures for marriages celebrated according to Congregational or Methodist rites relate only to the period before the inauguration of the Uniting Church on 22 June 1977.

(b) Marriages celebrated according to Presbyterian rites before the inauguration of the Uniting Church.

(c) Marriages celebrated according to Presbyterian rites after the inauguration of the Uniting Church.

## MARRIAGE OF MINORS

The *Marriage Act* 1961 stipulates the marriageable age to be eighteen years or over for a male and sixteen years or over for a female. Under exceptional circumstances a judge or magistrate can, upon application by a party who has not attained marriageable age but who is at least sixteen in the case of a male or fourteen in the case of a female, authorise him or her to marry a particular person who is of marriageable age.

Before 1 July 1973 prior consent had to be obtained from either both parents, one parent, a guardian or guardians, or other prescribed authority, according to the circumstances, where a party to a marriage was under twenty-one years. From 1 July 1973 the age of majority for purposes of the *Marriage Act* was reduced to eighteen years.

The proportion of persons marrying under 21 years of age has changed significantly since details were first recorded in 1903. In that year 2.7 per cent of males and 19.2 per cent of females marrying were under twenty-one years of age. Over the years the proportion of males has ranged from a low of 2.6 per cent in 1916 to a high of 18.3 per cent in 1974. The corresponding proportions for females were 14.7 and 49.3 per cent recorded in 1919 and 1974 respectively. These proportions fell in 1978 to 12.0 per cent for males and 37.4 per cent for females.

Figures relating to the marriages of persons under twenty-one years of age for the five years to 1978 are shown in the following table.

## Marriages of Persons Under 21 Years of Age, South Australia

Year	Age in Years							Total Under 21	Percentage of Total Marriages
	Under 15	15	16	17	18	19	20		
BRIDEGROOMS									
1974 .....	—	—	7	27	282	567	1 085	1 968	18.3
1975 .....	—	—	2	23	217	553	973	1 768	18.0
1976 .....	—	—	7	17	198	480	925	1 627	14.9
1977 .....	—	—	—	13	165	421	795	1 394	13.8
1978 .....	—	—	1	6	133	340	692	1 172	12.0
BRIDES									
1974 .....	1	12	195	463	1 249	1 635	1 757	5 312	49.3
1975 .....	1	8	154	448	1 113	1 530	1 459	4 713	47.9
1976 .....	—	8	141	343	1 083	1 410	1 564	4 549	41.7
1977 .....	—	6	119	322	898	1 301	1 362	4 008	39.6
1978 .....	—	4	79	271	800	1 228	1 279	3 661	37.4

**Further References**

Additional information may be found in the following publications:

**South Australian Office**

3304.4    *Marriages*

**Central Office**

3306.0    *Marriages*

## **6.8 DIVORCE**

The Supreme Court of South Australia had exclusive jurisdiction in divorce under the Matrimonial Causes Act, 1858 from 1 January 1859. Uniformity throughout Australia of dissolution of marriage and other matrimonial causes has operated since 1 February 1961 under the *Matrimonial Causes Act* 1959. Jurisdiction to hear and determine causes under the Act was vested in the Supreme Courts of the States and Territories. The South Australian Registry of the Family Court of Australia commenced operations under the *Family Law Act* 1975 on 5 January 1976. The Supreme Court had concurrent jurisdiction to deal with outstanding applications, presented before that date, until 31 May 1976.

The jurisdiction of the Supreme Court provided for petitions for nullity of marriage, judicial separation, restitution of conjugal rights and jactitation of marriage in addition to the most common petition for dissolution of marriage (commonly known as divorce).

**Family Court (SA Registry)**

Matrimonial causes within the jurisdiction of the Court include dissolution of marriage, maintenance, custody, property settlement, enforcement and injunction proceedings. The hearing of applications for dissolution commenced on 1 March 1976. The hearing of other matrimonial causes commenced earlier.

Under the provisions of the *Family Law Act* 1975 the sole ground for dissolution of marriage is irretrievable breakdown, established by twelve months separation. Prospective applicants are encouraged to seek help from marriage counsellors attached to the Family Court or from voluntary marriage guidance organisations.

Maintenance entitlement is determined largely by the needs of the applicant and the capacity of the respondent to pay. Any transfer or settlement of property is also taken into consideration.

In custody proceedings the welfare of the child is regarded as paramount. The Court can order that a child be separately represented in matters affecting his custody or maintenance. Both parties are considered liable for his maintenance according to their respective financial resources. If the proceedings are contested, both parties may be referred to a welfare officer, and the Court may then require a report on the child's circumstances.

In settling disputes over matrimonial property the Court takes into account any maintenance order and the effective contribution of each party to that property.

**Decrees Granted**

In 1978 there were 3 806 decrees granted for divorce, a decrease of 13.9 per cent on the 4 422 decrees granted in 1977. The decrease was possibly attributable to a run down in the number of actions accumulated pending proclamation of the new Act with its simplified provisions. In 1977 the *Matrimonial Causes Act* 1959 ceased to operate and all divorces granted from 1977 are granted under the *Family Law Act* 1975.

The following table shows the number of decrees granted for the years 1973 to 1978.

## Decrees Granted, South Australia

Decree	1978							
	1973	1974	1975	1976	1977	To Husband	To Wife	Total
MATRIMONIAL CAUSES ACT								
Dissolution of marriage .....	1 582	1 561	1 812	1 402	..	..	..	..
Nullity of marriage .....	6	4	4	5	..	..	..	..
Judicial separation .....	—	1	3	—	..	..	..	..
Total .....	1 588	1 566	1 819	1 407	..	..	..	..
FAMILY LAW ACT								
Dissolution of marriage .....	..	..	..	4 740	4 419	1 423	2 382	3 805
Nullity of marriage .....	..	..	..	1	3	—	1	1
Total .....	..	..	..	4 741	4 422	1 423	2 383	3 806
ALL DECREES GRANTED								
Total .....	1 588	1 566	1 819	6 148	4 422	1 423	2 383	3 806

Details of the relative ages at marriage of husbands and wives for marriages dissolved in 1978 are contained in the following table.

**Dissolution of Marriage: Ages of Parties at Time of Marriage  
South Australia, 1978**

Age of Husband (Years)	Age of Wife (Years)							Total Husbands
	Under 20	20-24	25-29	30-34	35-39	40-44	45 and Over	
Under 20 .....	390	89	6	2	—	—	—	487
20-24 .....	967	1 072	76	8	4	—	—	2 127
25-29 .....	130	407	120	29	4	3	2	696
30-34 .....	29	81	64	38	10	4	3	1 230
35-39 .....	9	22	25	12	17	6	3	94
40-44 .....	3	8	10	13	14	11	8	67
45 and over .....	1	3	8	11	12	14	54	103
Not stated .....	—	—	—	—	—	1	—	1
Total wives .....	1 529	1 682	309	113	61	38	71	2 383

The following table shows the duration of marriage, i.e. the interval between marriage and the date the decree was made absolute, for marriages dissolved during the five years to 1978.

**Dissolution of Marriage: Duration of Marriage  
South Australia**

Year	Duration of Marriage (Years)						Total	
	0-4	5-9	10-14	15-19	20-24	25-29		
1974 .....	150	523	325	213	149	118	83	1 561
1975 .....	162	602	384	263	179	123	99	1 812
1976 .....	915	1 904	1 145	728	652	449	349	6 148
1977 .....	811	1 329	868	535	381	278	217	4 422
1978 .....	745	1 119	746	431	360	218	186	3 806

For marriages dissolved in 1978 the following two tables show the relative ages of husbands and wives at the time of dissolution, and the duration of marriage and number of children of the marriage.

**Dissolution of Marriage: Ages of Parties at Time of Dissolution, South Australia, 1978**

Age of Husband (Years)	Age of Wife (Years)								Total Husbands
	Under 25	25-29	30-34	35-39	40-44	45-49	50 and Over	Not Stated	
Under 25 .....	243	31	—	1	—	—	—	—	275
25-29 .....	316	483	53	4	—	—	—	—	856
30-34 .....	35	330	381	44	4	1	—	—	795
35-39 .....	6	55	258	203	19	6	3	—	550
40-44 .....	2	11	62	191	157	26	9	—	458
45-49 .....	—	4	15	36	130	103	34	2	324
50 and over .....	—	4	8	27	44	121	342	—	546
Not stated .....	—	—	—	—	—	—	1	—	1
Total wives .....	602	918	777	506	354	257	389	2	3 805

**Dissolution of Marriage: Duration of Marriage and Number of Children of the Marriage South Australia, 1978<sup>(a)</sup>**

Duration of Marriage (Years)	Marriages Dissolved with						Total Dissolutions	Total Children
	No Children	1 Child	2 Children	3 Children	4 Children	5 Children		
Under 5 .....	471	198	63	11	1	1	—	366
5-9 .....	380	307	335	74	19	4	—	1 295
10-14 .....	96	108	341	141	48	7	5	1 471
15-19 .....	42	40	146	140	34	22	7	1 042
20-24 .....	88	123	94	42	5	6	2	499
25-29 .....	113	66	25	12	1	1	—	161
30 and over .....	157	19	5	5	—	—	—	44
Total dissolutions .....	1 347	861	1 009	425	108	41	14	3 805
Total children .....	..	861	2 018	1 275	432	205	87	4 878

(a) Number of children living and under 18 years at time of application.

The following table shows the number of children of marriages dissolved in the years 1974 to 1978.

**Dissolution of Marriage: Children of the Marriage, South Australia<sup>(a)</sup>**

Year	Number of Marriages Dissolved with						Total Dissolutions	Total Children
	No Children	1 Child	2 Children	3 Children	4 Children	5 Children		
1974 .....	449	383	418	198	73	27	13	1 561
1975 .....	505	422	481	239	109	42	14	1 812
1976 .....	2 225	1 397	1 487	681	247	73	32	6 142
1977 .....	1 533	1 043	1 140	461	170	47	25	4 419
1978 .....	1 347	861	1 009	425	108	41	14	3 805

(a) Number of children living and under 21 years at time of petition under the Matrimonial Causes Act, and under 18 years at time of application under the Family Law Act.

**Further References**

Additional information may be found in the following publications:

**South Australian Office**

3305.4      *Divorces*

**Central Office**

3307.0      *Divorces*

**PART 7**

**LABOUR**

**7.1 EMPLOYMENT**

**THE LABOUR FORCE**

Particulars of the number of persons who constitute the labour force in South Australia are available from periodic population censuses.<sup>1</sup> For the 1966 Census the definition of the labour force was revised to accord with the recommendations of the Eighth International Conference of Labour Statisticians, and the revised approach has been retained for subsequent censuses. The major factor in this change was the inclusion of a number of females working part-time who did not previously consider themselves as 'engaged in an industry, business, profession, trade or service'.

The introduction of sample processing in 1976 may result in minor differences between the sum of estimated components and estimated totals, and between totals in different tables. In the first table population at the 1971 and 1976 Censuses is classified by occupational status, which refers to the status of each person in his or her occupation *e.g.* employer, worker on own account, working for wages, etc. Those persons reporting themselves as not engaged in an industry, business, profession, trade or service take as their occupational status 'not in the labour force'.

The female proportion of the labour force has continued to increase, from 32.1 per cent in 1971 to 36.7 per cent in 1976. This has been paralleled by an increase in the proportion of married females in the labour force, which increased from 18.9 per cent in 1971 to 23.6 per cent in 1976.

**Occupational Status of the Population, South Australia  
Censuses 1971 and 1976**

Occupational Status	30 June 1971			30 June 1976		
	Males	Females	Persons	Males	Females	Persons
<b>In labour force:</b>						
Employer .....	19 468	5 832	25 300	} 55 168	25 711	80 878
Self-employed .....	29 713	8 302	38 015		166 638	458 308
Employee .....	275 292	135 712	411 004	291 670	1 489	8 148
Helper .....	1 009	2 240	3 249	6 659		
Unemployed ...	4 682	3 673	8 355	10 608	8 947	19 555
Total labour force .....	330 164	155 759	485 923	358 934	207 955	566 889
Not in labour force	255 887	431 897	687 784	261 221	416 641	677 862
Total population	586 051	587 656	1 173 707	620 156	624 596	1 244 752

The following table shows the employed population at the 1976 Census classified by occupation. Occupation refers to the kind of work a person normally performs e.g. carpenter, clerk, and is classified according to the Australian Classification of Occupations which has been adapted from and closely adheres to the principles embodied in the International Standard Classification of Occupations issued by the International Labour Office, Geneva 1958 and as revised in 1968. It contains eleven major groupings subdivided into seventy-three minor groups further subdivided into 395 individual categories.

**Employed Population: Occupation, South Australia, 30 June 1976**

Occupation Group	Males		Females		Persons	
	Number	Proportion of Total	Number	Proportion of Total	Number	Proportion of Total
Per cent						
Professional, technical and related workers .....	34 455	9.9	33 437	16.8	67 893	12.4
Administrative, executive and managerial workers .....	28 608	8.2	4 841	2.4	33 449	6.1
Clerical workers .....	28 254	8.1	54 310	27.3	82 564	15.1
Sales workers .....	20 479	5.9	22 720	11.4	43 199	7.9
Farmers, fishermen, hunters, timbergetters and related workers .....	34 203	9.8	16 190	8.1	50 394	9.2
Miners, quarrymen and related workers .....	1 259	0.4	46	0.0	1 306	0.2
Workers in transport and communication .....	23 274	6.7	3 591	1.8	26 865	4.9
Tradesmen, production-process workers and labourers (n.e.i.)	150 979	43.3	20 732	10.4	171 710	31.4
Service, sport and recreation workers .....	14 080	4.0	30 690	15.4	44 771	8.2
Members of armed services, enlisted personnel .....	2 667	0.8	111	0.1	2 778	0.5
Occupation inadequately described or not stated .....	10 068	2.9	12 340	6.2	22 408	4.1
Total employed population	348 328	100.0	199 009	100.0	547 336	100.0

Industry refers to the branch of productive activity, trade or service in which the individual works or carries out his occupation. The Australian Standard Industrial Classification (ASIC), designed primarily as a system for classifying establishments (e.g. individual mines, factories, shops etc.) by industry, was used as a basis for the 1976 Census. Tabulations derived for the census divide the whole field of industry into twelve major industry groups, which in turn are divided into forty-eight subdivisions, 121 groups and 432 classes. For census purposes a number of additional 'undefined' categories were added to qualify imprecise or generalised descriptions of industrial activities reported in census schedules. Revised versions of the Subdivision 'Agriculture' and the Group 'Education' were also adopted.

In the next table the number of employed males and females aged fifteen years and over at the 1976 Census are classified according to industry. The proportion of the employed population engaged in community services increased from 12.6 per cent in 1971 to 15.3 per cent in 1976. The percentage recorded as employed in manufacturing industries continued to fall, from 24.4 per cent in 1971 to 20.8 per cent in 1976, in contrast to the opposite trend evident between 1933 and 1966.

#### Employed Population: Industry, South Australia, 30 June 1976

Industry Group	Males		Females		Persons	
	Number	Proportion of Total	Number	Proportion of Total	Number	Proportion of Total
Per cent						
Agriculture, forestry, fishing, etc.	31 051	8.9	16 402	8.2	47 453	8.7
Mining .....	3 123	0.9	342	0.2	3 465	0.6
Manufacturing .....	88 333	25.4	25 261	12.7	113 594	20.8
Electricity, gas and water .....	9 524	2.7	531	0.3	10 055	1.8
Construction .....	40 154	11.5	4 024	2.0	44 177	8.1
Wholesale and retail trade .....	59 120	17.0	41 602	20.9	100 722	18.4
Transport and storage .....	21 337	6.1	3 194	1.6	24 530	4.5
Communication .....	7 952	2.3	2 467	1.2	10 419	1.9
Finance, business services, etc. ....	18 336	5.3	14 878	7.5	33 214	6.1
Public administration, defence .....	16 660	4.8	5 942	3.0	22 602	4.1
Community services .....	29 565	8.5	54 053	27.2	83 617	15.3
Entertainment, recreation, etc. ....	9 998	2.9	15 787	7.9	25 786	4.7
Other and not stated .....	13 174	3.8	14 529	7.3	27 703	5.1
Total employed population .....	348 327	100.0	199 009	100.0	547 336	100.0

The following table shows the age distribution of the labour force at the 1971 and 1976 Censuses.

#### Age Distribution of the Labour Force, South Australia Censuses 1971 and 1976

Age Group (Years)	30 June 1971			30 June 1976		
	Males	Females	Persons	Males	Females	Persons
15-19 .....	29 336	28 566	57 902	34 513	31 426	65 939
20-24 .....	43 697	29 018	72 715	46 532	34 519	81 051
25-34 .....	71 629	27 821	99 450	90 085	47 164	137 250
35-44 .....	68 277	30 743	99 020	66 832	40 651	107 483
45-54 .....	65 280	26 701	91 981	68 829	36 251	105 080
55-59 .....	26 057	7 715	33 772	26 501	10 413	36 913
60-64 .....	17 633	3 199	20 832	18 429	4 560	22 989
65 and over .....	8 255	1 996	10 251	7 215	2 972	10 187
Total labour force	330 164	155 759	485 923	358 935	207 955	566 890

### Labour Force Survey

In addition to complete census counts, estimates of the civilian labour force are prepared from the results of surveys based on a sample of dwellings throughout Australia. These surveys began in 1960 on a quarterly basis and were initially confined to the six State capital cities, but in 1964 were extended to include non-metropolitan urban and rural areas, thereby enabling derivation of estimates of the total civilian labour force in Australia. From February 1978, the surveys have been conducted on a monthly basis. The proportion of the population included in the surveys varies from State to State (1 per cent in South Australia) but in aggregate about 0.67 per cent of the Australian population is included.

Statistics obtained from the surveys include numbers employed and unemployed; labour force participation and unemployment rates; duration of unemployment; analyses of reasons for working less than 35 hours per week; as well as age, sex, occupation and industry characteristics.

Labour force survey estimates were revised at the same time as the population estimates. The revision to population estimates took account of the underenumeration at the 1966, 1971 and 1976 Population Censuses and also incorporated a method of measuring overseas migration gain, movements of less than one year duration being ignored. In the labour force survey a new sample of dwellings was selected and a revised questionnaire was introduced for the November 1977 survey. The new sample of dwellings was chosen in order to reflect the changes in the distribution of the population shown by the 1976 Population Census results. Therefore the labour force series from August 1966 to August 1977 has been revised and appears in the following table. However it should be noted that figures for August each year are shown, as State estimates are available only for each August before 1971.

**Civilian Population Aged 15 Years and Over: Employment Status, South Australia**

August	Employed	Unemployed			Labour Force	Not in Labour Force	Civilian Population Aged 15 years and Over	Unemployment Rate (a)	Participation Rate (b)
		Looking for	Looking for	Total					
		Full-time Work	Part-time Work						
MALES ('000)									
1966 .....	316.6	5.3	(c)	5.3	321.9	57.7	379.6	1.6	84.8
1967 .....	315.0	4.7	(c)	4.9	319.8	65.2	385.1	1.5	83.1
1968 .....	323.9	4.7	(c)	4.9	328.7	62.5	391.2	1.5	84.0
1969 .....	329.3	(c)	(c)	3.4	332.7	64.8	397.5	1.0	83.7
1970 .....	331.4	3.3	(c)	4.0	335.4	65.4	400.8	1.2	83.7
1971 .....	338.0	4.8	(c)	5.1	343.2	69.8	413.0	1.5	83.1
1972 .....	341.5	6.7	(c)	7.5	348.9	72.0	421.0	2.1	82.9
1973 .....	352.9	4.2	(c)	5.3	358.3	72.7	430.9	1.5	83.1
1974 .....	358.5	5.2	(c)	5.8	364.3	75.9	440.2	1.6	82.8
1975 .....	355.0	10.3	(c)	11.5	366.5	81.7	448.2	3.1	81.8
1976 .....	361.0	9.4	(c)	11.0	372.0	85.3	457.3	3.0	81.3
1977 .....	359.2	17.3	3.3	20.6	379.8	86.5	466.3	5.4	81.5
1978 .....	350.2	27.5	(c)	28.4	378.7	96.7	475.3	7.5	79.7
1979 .....	348.8	23.2	(c)	24.0	372.8	105.9	478.8	6.4	77.9
FEMALES ('000)									
1966 .....	136.5	4.1	(c)	7.0	143.5	244.4	387.9	4.9	37.0
1967 .....	138.1	4.8	(c)	6.4	144.5	249.8	394.2	4.4	36.6
1968 .....	146.0	4.4	(c)	6.2	152.1	250.4	402.5	4.0	37.8
1969 .....	155.8	3.6	(c)	5.4	161.2	248.6	409.9	3.4	39.3
1970 .....	163.1	(c)	(c)	5.0	168.1	250.0	418.0	3.0	40.2
1971 .....	162.1	5.6	(c)	7.9	170.1	255.6	425.7	4.7	40.0
1972 .....	172.6	6.1	3.5	9.6	182.2	252.1	434.4	5.3	42.0
1973 .....	188.0	4.4	4.1	8.4	196.5	247.4	443.9	4.3	44.3
1974 .....	190.9	5.9	4.1	10.0	200.9	252.0	452.9	5.0	44.4

**Civilian Population Aged 15 Years and Over: Employment Status, South Australia  
(continued)**

August	Employed	Unemployed			Labour Force	Not in Labour Force	Civilian Population Aged 15 years and Over	Unemployment Rate (a)	Participation Rate (b)
		Looking for	Looking for	Total					
		Full-time Work	Part-time Work						
1975 .....	194.3	11.5	5.6	17.0	211.3	251.9	463.2	8.0	45.6
1976 .....	203.2	9.1	4.6	13.7	217.0	254.3	471.3	6.3	46.0
1977 .....	208.7	13.1	4.7	17.8	226.6	254.1	480.7	7.9	47.1
1978 .....	203.2	12.4	3.4	15.8	219.0	271.5	490.4	7.2	44.6
1979 .....	198.6	16.6	4.6	21.3	219.9	275.0	494.9	9.7	44.4
PERSONS ('000)									
1966 .....	453.1	9.5	(c)	12.3	465.4	302.2	767.5	2.6	60.6
1967 .....	453.1	9.5	(c)	11.2	464.3	315.0	779.3	2.4	59.6
1968 .....	469.9	9.2	(c)	11.0	480.9	312.8	793.7	2.3	60.6
1969 .....	485.1	6.2	(c)	8.9	494.0	313.4	807.4	1.8	61.2
1970 .....	494.5	5.9	3.0	8.9	503.4	315.4	818.8	1.8	61.5
1971 .....	500.2	10.4	(c)	13.1	513.2	325.4	838.7	2.5	61.2
1972 .....	514.1	12.8	4.3	17.1	531.2	324.2	855.3	3.2	62.1
1973 .....	541.0	8.6	5.2	13.7	554.7	320.1	874.8	2.5	63.4
1974 .....	549.4	11.0	4.8	15.8	565.2	327.9	893.1	2.8	63.3
1975 .....	549.3	21.7	6.8	28.5	577.8	333.7	911.4	4.9	63.4
1976 .....	564.2	18.5	6.2	24.7	589.0	339.6	928.6	4.2	63.4
1977 .....	568.0	30.5	8.0	38.5	606.4	340.6	947.0	6.3	64.0
1978 .....	553.4	39.8	4.4	44.2	597.6	368.1	965.8	7.4	61.9
1979 .....	547.4	39.9	5.4	45.3	592.7	380.9	973.6	7.6	60.9

(a) The unemployment rate for any group is the number unemployed expressed as a percentage of the labour force (*i.e.* employed plus unemployed) in the same group.

(b) Labour force participation rate for any group is the civilian labour force expressed as a percentage of the civilian population aged 15 years and over in the same group.

(c) Subject to sampling variability too high for most practical uses.

Since the estimates are based on a sample, they may differ from the figures that would have been obtained from a complete census using the same questionnaire and procedures. One measure of the likely difference is given by the standard error, which indicates the extent to which an estimate might have varied by chance because only a sample and not the whole population was enumerated. The smaller the estimate the higher is the relative standard error. For example, the standard error of an estimate for South Australia of 500 000 persons is approximately 3 300 (0.7 per cent), while that of an estimate of 3 000 is approximately 550 (18.3 per cent). There are about two chances in three that a sample estimate will differ by less than one standard error from the figures that would have been obtained from a comparable complete enumeration, and about nineteen chances in twenty that the difference will be less than two standard errors. Further details may be obtained from bulletins relating to the surveys which are discussed in the following pages.

The definition of the labour force used in the population census is similar to that used in the survey. However, data from the Labour Force Surveys is based upon a sample employing a personal interview approach, while census data is obtained from census schedules completed by householders. Evidence indicates that the personal interview approach tends to identify a larger number of persons as being in the labour force than does the filling in of the questions on the census schedule by the householder. This should be borne in mind when making comparisons between the two sets of data.

Further details may be obtained from the following bulletins: *Unemployment, Preliminary Estimates* (Catalogue No. 6201.0); *The Labour Force (Preliminary)* (Catalogue No. 6202.0); *The Labour Force* (Catalogue No. 6203.0). In addition, *The Labour Force* (Catalogue No. 6201.4) contains detailed figures for South Australia.

## Special Studies

The sample of dwellings referred to in respect of the Labour Force Survey has provided the framework for a number of special studies. These have recently included: the nature and extent of multiple jobholding; leavers from schools etc.; the distribution of weekly earnings of wage and salary earners; information on persons not in the labour force; information about persons who had recently been looking for work; information about changes of employment or job location and other aspects of the mobility of the labour force. Brief summaries of some of these studies are given in the following pages.

Since the estimates provided in these studies are based on sample surveys they are subject to sampling error, the magnitude of which is described in some detail in the bulletins for each topic.

### *Leavers from Schools, Universities or Other Educational Institutions*

In May 1979, a survey was conducted in conjunction with the Labour Force Survey in order to obtain, among other things, information about persons aged 15 to 25 years who had attended full-time at a school, university or other educational institution at some time during 1978. Separate information was obtained in respect of persons who had returned to full-time education in 1979 and those who had not returned to full-time education. The latter group was defined as being leavers.

The number of leavers who entered the labour force expressed as a percentage of total leavers describes their labour force participation rates. This rate for South Australian males in May 1979 was 98.5 per cent compared with the national rate of 96.4 per cent while the equivalent rate for females was 95.8 per cent in this State and 94.4 per cent for Australia. Of the 28 600 leavers in this State, 19 100 were employed and 8 800 unemployed.

For comments on the reliability of the above estimates and for detailed results of this survey and other similar surveys carried out in February of each year from 1964 to 1974, in May 1975 and 1976 and in August 1977 and 1978, refer to bulletins entitled *Leavers from Schools, Universities or other Educational Institutions* (Catalogue No. 6227.0).

### *Multiple Jobholding*

In August 1979 the Labour Force Survey was extended to obtain information about the nature and extent of multiple jobholding. The following table shows the number and the proportion of persons in the labour force who held a second job.

**Multiple Jobholders: Number and Proportion of Persons in the Labour Force who Held a Second Job, by Marital Status, South Australia, August 1979**

Multiple Jobholders	Males			Females			Persons		
	Married	Not Married (a)	Total	Married	Not Married (a)	Total	Married	Not Married (a)	Total
Number ..... ('000)	11.7	3.6	15.3	4.6	(c)	5.9	16.3	4.9	21.2
Proportion of labour force (b) .....(Per cent)	4.5	3.2	4.1	3.4	(c)	2.7	4.1	2.5	3.6

(a) Never married, widowed and divorced.

(b) Multiple jobholders in each group as a percentage of the civilian labour force in the same group.

(c) Subject to sampling variability too high for most practical purposes.

Further details regarding the above survey and comparability with previous similar surveys may be obtained from the bulletin *Multiple Jobholding*, August 1979 (Catalogue No. 6216.0).

#### *Persons Not in the Labour Force*

In September 1979, the Labour Force Survey included questions to obtain information about persons aged 15 to 64 years who were not in the labour force: in particular, whether they wanted a job (and, if they did, why they were not looking for work) and whether they had ever held a regular job and, if so, how long ago and for what reason they had left.

The following table shows for persons not in the labour force and who wanted a job, the reason for not looking for work. It should be noted that, unlike previous similar surveys, the September 1979 survey included (for the first time) those persons who, although claiming to have looked for work in the four weeks up to and including survey week, had not taken active steps to find employment.

**Persons Aged 15 to 64 Years Who Were Not in the Labour Force and Who Wanted a Job Reason for Not Actively Looking for Work, South Australia, September 1979<sup>(a)</sup>**

Reason for Not Actively Looking for Work	Males ('000)
Own ill health or physical disability .....	2.9
Attending an educational institution .....	4.0
<b>Total males (b) .....</b>	<b>8.7</b>
<hr/>	
Females ('000)	
Own ill health, disability or pregnancy .....	4.0
Attending an educational institution .....	6.4
Has no need to work .....	4.4
Family considerations (c) .....	19.1
Preferred to look after children .....	10.9
Discouraged (d) .....	5.8
No jobs in locality or line of work .....	3.6
No jobs in suitable hours .....	(e)
Other (f) .....	4.2
<b>Total females .....</b>	<b>44.9</b>

(a) Highest-ranked reason only.

(b) Includes all other reasons.

(c) Includes 'ill health of other than self', 'husband disapproved' and 'other family considerations'.

(d) Defined as those who wanted a job but were not actively looking for work because they believed they would not be able to find a job for any of several reasons, including 'no jobs in locality or line of work'.

(e) Subject to sampling variability too high for most practical purposes.

(f) Includes females who had a job to go to.

For further details of the September 1979 survey and on discontinued similar surveys, refer to the bulletin *Persons Not in the Labour Force* (Catalogue No. 6220.0).

#### CIVILIAN EMPLOYEES

Details of the number of wage and salary earners in civilian employment are estimated on a monthly basis. These estimates, which exclude employees in agriculture and private domestic service, are based on information obtained from population censuses and other sources, known as benchmarks, and adjustments to these benchmarks are made from certain current information.

The civilian employees' series, previously based on the 1971 Population Census benchmark, have been revised following adjustment of the population censuses for underenumeration.

The new estimates are based on revised benchmark data obtained from the 1966, 1971 and 1976 Population Censuses and many other sources *i.e.* labour force surveys, various economic censuses and surveys and on current data from payroll tax returns, returns from government bodies and other employment returns. For each State new totals are available for males and females from June 1966 but because reliable benchmark data at the detailed industry level was not available, industry estimates for June 1966 to May 1971 were only calculated for Australia. Also, because of changes in the private/government dissection of employees, estimates of private and State government before June 1971 are not comparable with those for later periods.

At June 1979, the government sector (government departments, local government authorities, public corporations and public trading and financial enterprises) employed 32 per cent of total civilian employees.

Further information on the series may be obtained from the bulletin *Civilian Employees, Australia, June 1966 to June 1979* (Catalogue No. 6214.0) and from the monthly bulletin *Civilian Employees* (Catalogue No. 6213.0) from July 1979 issue onwards. For employment in specific sectors such as factories, agriculture, the building industry, etc. further information is found in the relevant sections of this Year Book.

The revised estimates incorporating industry details based on the 1969 Preliminary Edition of the *Australian Standard Industrial Classification* (ASIC) are shown in the following table.

### **Civilian Employees, South Australia<sup>(a)</sup>**

June	Principal Industries					Class of Employer			Total
	Manufacturing	Construction	Wholesale and Retail Trade	Community Services	Government			Private	
					Australian	State	Local	Private	
MALES ('000)									
1966 .....					21.6	45.0	4.3	177.1	248.0
1967 .....					22.3	45.5	4.5	178.8	251.1
1968 .....					22.4	46.7	4.5	185.8	259.4
1969 .....					22.3	47.2	4.6	192.8	266.9
1970 .....					22.4	48.3	4.7	196.8	272.2
1971 .....	97.2	30.8	51.8	25.3	22.9	(b) 49.9	4.5	(b) 200.1	277.3
1972 .....	94.8	31.7	50.8	27.2	23.2	51.5	5.6	196.8	277.0
1973 .....	95.9	33.5	52.3	28.8	23.7	53.7	6.6	200.3	284.3
1974 .....	98.1	32.6	55.1	30.5	24.4	55.5	4.7	208.3	292.9
1975 .....	90.8	36.4	54.1	32.2	25.0	59.1	6.8	202.2	293.1
1976 .....	90.3	34.1	55.9	34.2	24.5	61.2	5.8	202.4	293.8
1977 .....	87.6	33.5	55.1	35.5	24.2	62.9	5.7	197.5	290.3
1978 .....	80.8	31.3	53.0	36.0	(c) 31.4	(c) 56.2	6.0	186.8	280.3
1979 .....	82.8	30.1	52.5	36.2	30.7	55.5	5.6	189.1	280.9
FEMALES ('000)									
1966 .....					5.3	16.1	0.6	91.3	113.3
1967 .....					5.6	16.8	0.6	94.3	117.3
1968 .....					5.6	17.8	0.7	99.7	123.8
1969 .....					5.7	18.8	0.7	104.2	129.4
1970 .....					6.0	21.0	0.7	110.4	138.1
1971 .....	25.6	1.8	38.8	39.9	6.1	(b) 26.8	0.8	(b) 111.1	144.7
1972 .....	25.6	1.9	39.5	42.8	6.2	28.7	0.9	112.4	148.2
1973 .....	28.1	1.9	40.1	46.6	6.5	31.3	0.9	119.3	158.0
1974 .....	31.3	2.0	43.1	52.5	7.1	36.2	0.9	129.7	173.9
1975 .....	26.4	2.1	41.0	56.2	7.5	40.8	1.1	122.8	172.3
1976 .....	26.8	2.3	42.8	61.0	7.5	43.7	1.0	127.7	179.9
1977 .....	25.1	2.4	42.4	63.5	7.5	46.1	1.1	126.2	180.9
1978 .....	23.0	2.2	40.7	65.7	(c) 8.1	(c) 47.3	1.3	122.6	179.3
1979 .....	23.6	2.4	41.0	64.8	8.1	46.6	1.4	123.9	180.0

Civilian Employees, South Australia<sup>(a)</sup> (continued)

June	Principal Industries				Class of Employer			Total	
	Manufacturing	Construction	Wholesale and Retail Trade	Community Services	Government		Private		
					Australian	State			
PERSONS ('000)									
1966 .....					26.9	61.1	4.9	268.4	
1967 .....					27.9	62.3	5.1	273.1	
1968 .....					28.0	64.5	5.2	285.5	
1969 .....					28.0	66.0	5.3	297.0	
1970 .....					28.4	69.3	5.4	307.2	
1971 .....	122.7	32.7	90.6	65.2	29.0	(b) 76.7	5.3	(b) 311.1	
1972 .....	120.3	33.6	90.3	70.0	29.4	80.2	6.5	309.3	
1973 .....	124.0	35.4	92.4	75.4	30.2	84.9	7.5	319.6	
1974 .....	129.4	34.6	98.2	83.1	31.5	91.7	5.6	338.0	
1975 .....	117.2	38.6	95.2	88.4	32.5	99.9	7.9	325.0	
1976 .....	117.1	36.4	98.8	95.2	32.0	104.9	6.8	330.1	
1977 .....	112.7	35.8	97.4	99.0	31.7	109.0	6.9	323.7	
1978 .....	103.9	33.5	93.7	101.7	(c) 39.5	(c) 103.5	7.3	309.4	
1979 .....	106.4	32.4	93.5	101.1	38.8	102.2	7.0	313.0	
								460.9	

(a) Excludes employees in agriculture, private domestic service and defence forces.

(b) Estimates of private and State government employment before June 1971 are not comparable with those for later periods.

(c) On 1 March 1978 the majority of SA Railway's employees were transferred to the Australian National Railways.

## UNEMPLOYMENT

## Labour Force Surveys

Estimates of unemployment are derived from the monthly population survey. Until February 1978, surveys were conducted quarterly in February, May, August and November each year. From February 1978, the surveys have been conducted on a monthly basis.

For the purpose of the survey, unemployed persons are those aged 15 years and over who were not employed during the survey week and:

- (a) had actively looked for full-time or part-time work at any time in the four weeks up to the end of the survey week and;
- (i) were available for work in the survey week, or would have been available except for temporary illness (*i.e.* lasting for less than four weeks to the end of the survey week); or
- (ii) were waiting to start a new job within four weeks from the end of the survey week and would have started in the survey week if the job had been available then; or
- (b) were waiting to be called back to a full-time or part-time job from which they had been stood down without pay for less than four weeks up to the end of the survey week (including the whole of the survey week) for reasons other than bad weather or plant breakdown.

The following table contains estimates of the number of unemployed persons in South Australia and the corresponding unemployment rates, and the standard errors of each estimate. For an explanation of the standard error, see page 306.

## Unemployed Persons, South Australia

Particulars	Month			Standard Error		
	Oct. 1979	Nov. 1979	Dec. 1979	Nov. 1979 Estimate	Dec. 1979 Estimate	Nov. to December Movement
NUMBER ('000)						
Looking for full-time work:						
Aged 15-19 years .....	16.7	11.3	15.3	0.9	1.1	0.9
Aged 20 years and over .....	23.2	22.5	22.7	1.2	1.2	1.0
Total .....	39.9	33.8	38.0	1.4	1.5	1.1
Looking for part-time work .....	4.1	4.8	6.6	0.7	0.8	0.7
Total .....	44.0	38.6	44.6	1.5	1.6	1.2
UNEMPLOYMENT RATE (a)						
Looking for full-time work:						
Aged 15-19 years .....	27.3	19.2	24.0	1.6	1.7	1.4
Aged 20 years and over .....	5.4	5.3	5.2	0.3	0.3	0.2
Total .....	8.2	6.9	7.6	0.3	0.3	0.2
Looking for part-time work .....	3.8	4.7	6.3	0.7	0.8	0.7
Total .....	7.4	6.6	7.4	0.3	0.3	0.2

(a) The unemployment rate is the number of unemployed in each group as a percentage of the estimated labour force (i.e. employed plus unemployed) in the same group.

Further details may be obtained from the following bulletins: *Unemployment, Preliminary Estimates* (Catalogue No. 6201.0); *The Labour Force (Preliminary)* (Catalogue No. 6202.0); *The Labour Force* (Catalogue No. 6203.0). In addition, *The Labour Force* (Catalogue No. 6201.4) contains detailed figures for South Australia.

## EMPLOYMENT SERVICES

The Commonwealth Employment Service, administered by the Department of Employment and Youth Affairs, commenced operations in South Australia in May 1946. The main function of the Employment Service is to assist people seeking employment to obtain positions best suited to their training, experience, abilities and qualifications; and to assist employers seeking labour to obtain employees best suited to the demands of the employers' particular class of work.

Further details concerning the operations of the Commonwealth Employment Service may be found in *Year Book Australia* No. 63, 1979.

The Department of Employment and Youth Affairs is also responsible for the administration of three schemes offering financial assistance to employers to recruit and train new staff. The National Employment and Training system (NEAT) is a vocational training scheme designed to assist persons whose employment prospects would be enhanced by training. Further information on the NEAT scheme is contained in Part 6.2 Education. The Special Youth Employment and Training Programme (SYETP) is specifically designed to encourage employment of people under 25 years of age. The Commonwealth Rebate for Apprentice Full-time Training (CRAFT) scheme offers tax free rebates to offset the cost of time lost in formal off-the-job training to firms taking on apprentices.

The State Government has a number of programs designed to alleviate unemployment in South Australia. The Youth Bureau of the Department of Industrial Affairs and Employment, runs Community Improvement Through Youth (CITY) which assists young unemployed people to gain skills and confidence through the planning and management of community service projects, and the Self-Employment Ventures Scheme which assists unemployed people commencing in self-employment.

A payroll tax refund program (administered by the Department of Industrial Affairs and Employment) and a payroll tax exemption scheme (administered by the State Treasury Department) were introduced from October 1979 to provide incentives for the employment of people under 20 years of age. The Department of Industrial Affairs and Employment also administers an exemption scheme for rural areas but without an upper age limit.

There are also a number of private employment agencies, all of which are required to register with the Department of Industrial Affairs and Employment. At 31 December 1979 there were thirty-one such agencies registered.

## 7.2 ARBITRATION AND INDUSTRIAL ORGANISATIONS

### INDUSTRIAL ARBITRATION

In Australia a unique system of conciliation and arbitration by Government tribunals has been developed, with the Commonwealth and the State Parliaments each passing their own industrial legislation.

Under Section 51 of the Constitution, the Commonwealth Parliament may make laws in relation to 'conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State'. In addition the Parliament may legislate under certain industrial powers for the stevedoring industry, the maritime industry, the Commonwealth Public Service, certain national projects, the Snowy Mountains Area and flight crew officers. Commonwealth arbitration is binding only on the parties to a dispute and decisions need not be of general application to an industry.

Employees not specifically covered by Commonwealth awards are subject to State industrial jurisdiction, but where an award or determination of a State industrial tribunal is inconsistent with an award of a Commonwealth tribunal, the latter prevails to the extent of the inconsistency.

#### Commonwealth Industrial Tribunals

Before 1956 a Court of Conciliation and Arbitration was responsible for the prevention and settlement of industrial disputes extending beyond the limits of any one State. In that year substantial amendments were made to the Conciliation and Arbitration Act separating the judicial and arbitral functions of the Court by the establishment of the Australian Industrial Court and the Australian Conciliation and Arbitration Commission.

In February 1977 a further change was made when the jurisdiction exercised by the Industrial Court was transferred to the Industrial Division of the Federal Court of Australia.

The Conciliation and Arbitration Commission comprises a President and as many Deputy Presidents and Commissioners as are necessary.

The Commission carries out its functions of conciliation and arbitration through panels. The President assigns an industry or a group of industries to a panel consisting of a Presidential Member and one or more Commissioners.

Certain matters cannot be determined by a single member of the Commission. Those matters which must be determined by a Full Bench of the Commission, consisting of a number of Presidential Members and Commissioners, include standard hours, national wage cases, the minimum wage, equal pay principles, annual leave and long service leave.

The jurisdiction of the Commission is limited to conciliation and arbitration of interstate industrial disputes between employers and employees. The employees must be engaged in employment that is 'industrial' in nature.

### State Industrial Tribunals

The South Australian legislation governing State intervention in industrial relations is the Industrial Conciliation and Arbitration Act, 1972-1979, the principal Act having come into operation on 1 January 1973. This Act provides for:

- (1) an Industrial Court which deals with questions of law, interpretations of awards and industrial agreements, claims for sums of money due to employees, re-employment matters, industrial offences and a number of other matters;
- (2) an Industrial Commission which makes awards covering workers not under the jurisdiction of Conciliation Committees and which has jurisdiction to hear and settle disputes and demarcation matters; and,
- (3) Conciliation Committees which make or vary awards for an industry or area of the State in relation to which each Committee is appointed.

The Commission is composed of a President, five Deputy Presidents and four Commissioners. Arbitral functions of the Commission may be exercised by a presidential member or a Commissioner as directed by the President. The Registrar and other officers of the Court and Commission are appointed under the Public Service Act.

The Commissioners are Chairmen of Conciliation Committees consisting of an equal number of representatives of employers and employees. Conciliation Committees have the same jurisdiction in industrial matters as the Commission. If the process of conciliation before a Committee fails then the Chairman sits as a Commissioner to determine the unresolved matters.

The Industrial Court is composed of the President and Deputy Presidents, respectively, of the Commission as well as three Industrial Magistrates.

Proceedings before the Industrial Commission may be commenced by an application submitted by:

- (1) the Minister of Industrial Affairs;
- (2) an employer, or group or registered association of employers in an industry employing, in aggregate, not less than twenty employees or 75 per cent of the employees within an industry, whichever is the lesser;
- (3) a group or registered association consisting of not less than twenty employees or 75 per cent of the employees within an industry, whichever is the lesser.

Employer or employee associations may apply for registration which confers a legal corporate status and allows ready access to the Commission.

At the end of December 1978, there were nine associations of employers and seventy-three associations of employees registered with the Industrial Registrar. Membership of these employee associations totalled 166 803.

Further details regarding State Industrial Tribunals may be found in the *South Australian Year Book* 1977 and in the Annual Report of the former Department of Labour and Industry.

### EMPLOYEE ORGANISATIONS

At 31 December 1978 there were 138 separate unions operating in South Australia; although a number of unions exist only in this State, branches of interstate or federated unions account for the majority of total membership. Some of these are bound under a system of unification with centralised control while others are practically independent and self-governing, the federal bond existing only for limited specified purposes.

The following table gives particulars of the number of separate unions and union membership for the years 1974 to 1978. The table includes estimated percentages of trade union members to total wage and salary earners in employment. The estimates of total

wage and salary earners have been derived by adding figures for employees in agriculture and private households employing staff to the estimates of employees in all other industries at the end of each year. The percentages shown should be regarded as giving only a broad indication of the extent of union membership among wage and salary earners because they are based on estimates of *employed* wage and salary earners that are subject to revision. The degree of unemployment of reported union members would affect the percentages for a particular year and comparisons over time. The employment estimates are incorporated from bench-marks derived from the 1971 Population Census and other sources.

#### Trade Unions, South Australia, At 31 December

Year	Separate Unions	Members			Proportion of Members to Total Wage and Salary Earners		
		Males	Females	Persons	Males	Females	Persons
	No.		'000				Per cent
1974 .....	135	189.4	63.4	252.8	66	39	56
1975 .....	135	187.3	68.2	255.6	66	41	57
1976 .....	137	186.4	69.3	255.7	64	40	55
1977 .....	140	189.0	75.9	264.9	67	44	58
1978 .....	138	189.4	75.8	265.2	69	44	59

The central labour organisation for the State is the United Trades and Labor Council of South Australia, and combined union councils exist for Mount Gambier, Port Augusta, Port Lincoln, Port Pirie, the Upper Murray, Leigh Creek and Whyalla. These central organisations, together with individual unions are affiliated with the Australian Council of Trade Unions (ACTU). All major unions are affiliated with the ACTU, which was founded at an All-Australian Trade Union Congress in 1927. The Trades and Labor Council is the State branch of the ACTU and has the right to appoint one representative to act on the executive of the ACTU.

A historical summary of the growth of the trade union movement in South Australia was included on pages 280-1 of the *South Australian Year Book 1969*.

#### EMPLOYER ORGANISATIONS

In industrial matters there are four dominant employer organisations in the State:

- (1) The South Australian Employers Federation Inc., which works mainly under the State Industrial Conciliation and Arbitration Act, is a federation of employer organisations, although provision is made for individual membership. Services provided include the negotiating and drafting of industrial agreements, and the preparation and presentation of cases before industrial tribunals. Advice is provided on existing awards and determinations, and on various aspects of industrial legislation.
- (2) The Chamber of Commerce and Industry (SA) Inc., which also works mainly under the State Industrial Conciliation and Arbitration Act, has individual members who subscribe directly to the Chamber for the industrial and other services provided. Where appropriate, members are grouped into trade associations. The Chamber's industrial advocates represent members in the making and variation of awards, and assist members in the settlement of disputes. The Chamber monitors Bills presented to the Parliaments and,

where appropriate, makes representations on behalf of its members seeking amendments to legislation.

- (3) The Metal Industries Association, South Australia (MIASA) is the principal employers' organisation registered under the provisions of the Commonwealth Conciliation and Arbitration Act. It represents the varied interests of the State's metal and engineering manufacturing sector by monitoring developments in industrial relations, education and training, trade, economic and legislative matters.
- (4) The South Australian Automobile Chamber of Commerce Inc., also registered under the Commonwealth Conciliation and Arbitration Act, is an industrial organisation aimed at protecting and conserving the interests of employers in the motor and allied industries.

### INDUSTRIAL DISPUTES

In the following table industrial disputes occurring during 1979 are compiled according to the *Australian Standard Industrial Classification* (ASIC). A dispute involving workers in more than one industry group is counted once only and is included in the industry group which has the largest number of workers involved.

**Industrial Disputes: Industries, South Australia, 1979<sup>(a)</sup>**

Industry	Disputes	Workers Involved (b)	Working Days Lost	Estimated Loss in Wages
Agriculture, forestry, fishing and hunting .....	1	1'000	1'000	\$1'000
Mining .....	2	0.8	1.8	69
Manufacturing:				
Food, beverages and tobacco .....	17	7.9	29.3	1 053
Textiles, clothing and footwear .....	—	0.8	1.0	36
Wood, wood products and furniture .....	3	1.7	2.7	93
Paper and paper products, printing and publishing .....	3	1.2	2.1	82
Chemical, petroleum and coal products .....	—	0.4	0.5	18
Metal products, machinery and equipment (c) .....	13	32.8	65.4	2 347
Other manufacturing (d) .....	3	1.9	2.3	89
Electricity, gas and water .....	5	3.5	3.3	125
Construction .....	16	5.8	8.2	324
Wholesale and retail trade .....	1	(e)	(e)	1
Transport and storage, communication:				
Water transport .....	3	1.0	2.6	100
Railway transport, air transport .....	5	7.3	34.0	1 257
Road transport, other transport and storage, communication .....	12	10.9	13.7	501
Entertainment, recreation, restaurants, hotels and personal services .....	2	2.2	3.6	126
Other industries .....	10	13.9	10.0	359
Total .....	96	92.5	186.5	6 785

(a) Disputes involving a stoppage of work of ten man-days or more.

(b) Includes workers indirectly involved at the establishments where the stoppages occurred.

(c) Includes basic metal products, fabricated metal products, transport equipment and other industrial machinery and equipment and household appliances.

(d) Includes non-metallic mineral products and leather, rubber and plastic products.

(e) Less than 50 workers involved and less than 50 working days lost.

Particulars of all disputes in progress during the year are included in the annual figures. Consequently, details of the number of disputes and of workers involved in the disputes which commenced in any year, and were still in progress during the following year, are included in the figures for both years. Working days and wages lost are included in the appropriate year. Workers involved in more than one dispute during the year are counted once for each dispute. Because of difficulties in identifying all participants in every

dispute the statistics should be regarded as giving only a broad measure of the extent of work stoppages.

Details of the number and extent of industrial disputes occurring in South Australia are shown in the next table. Effects on other establishments because of lack of materials, disruption of transport services, power cuts, etc. are not included in these statistics.

#### Industrial Disputes, South Australia<sup>(a)</sup>

Period	Disputes	Workers Involved (b)	Working Days Lost	Estimated Loss in Wages
Year:				\$'000
1974 .....	180	116 300	316 500	6 105.1
1975 .....	194	69 600	127 600	3 168.2
1976 .....	118	130 400	151 800	4 285.2
1977 .....	93	26 400	30 600	940.0
1978 .....	119	50 000	79 100	2 639.0
1979 .....	96	92 500	186 500	6 785.0

(a) Disputes involving a stoppage of work of ten man-days or more.

(b) Includes workers indirectly involved at the establishments where the stoppages occurred.

#### EMPLOYEE PARTICIPATION

Before the State Elections in September 1979 the Unit for Industrial Democracy co-ordinated an employee participation program. Following the election the Unit was disbanded and an Employee Participation Branch was formed in the Department of Industrial Affairs and Employment. The work of the Branch includes assistance in developing participation schemes, providing help to organisations involved in implementing some form of employee participation, and providing basic information concerning employee participation to organisations and the public at large.

At the beginning of 1979, a survey of the level of employee participation taking place in government sector organisations was undertaken. It showed that 55 per cent of all public service organisations had some form of participation activity under way.

The main development in the private sector has been directed towards achieving more effective work structures and relationships between employers and employees, and in creating and enlarging the opportunity and the ability of people at work to influence decisions which affect their worklife. It aims to encourage the voluntary introduction of employee participation in the form of improved communication, joint consultative committees and the redesign of work tasks. The Government's role is to advise and assist employees and management to initiate such schemes only when requested. A particular feature in the private sector has been a developing interest in schemes by which employees are given a share in the company employing them.

#### Further References

Additional information may be found in the bulletin *Industrial Disputes* (Catalogue No. 6322.0) published by the Central Office of the Australian Bureau of Statistics.

## 7.3 WAGES AND HOURS

### WAGES

Before the National Wage Cases of 1967, wages consisted of two distinct elements, a basic or living wage and a margin or loading which was appropriate to the employee's occupation. A more detailed description of these elements was included on pages 253 and 257-8 of the *South Australian Year Book* 1967.

The total wage concept was accepted by the decision of the Conciliation and Arbitration Commission in June 1967. The application of this concept (until the introduction of wage indexation guidelines in 1975) limited the number of national wage cases in any year to one and provided the Commission with a flexible basis for decisions.

#### National Wage Fixation

The *Conciliation and Arbitration Act* 1904 gives the Australian Conciliation and Arbitration Commission power to make an award or to certify an agreement 'making provision for, or altering, rates of wages, or the manner in which rates of wages are to be ascertained, on grounds predominantly related to the national economy and without examination of any circumstance pertaining to the work upon which, or the industry in which, persons are employed'. The Commission holds wage inquiries from time to time with its findings applicable to industrial awards within its jurisdiction. A detailed account of the history of national wage fixation before the introduction of the total wage concept appears in the *Arbitration Reports* and a summary was included on pages 257-60 of the *South Australian Year Book* 1968.

In the 1975 National Wage Case, principles were adopted which included indexing award wages to changes in the Consumer Price Index. The following table shows the change in the Consumer Price Index, the award wage increase and the increase in the weekly minimum wage for each quarter from the beginning of 1975.

**Wage Indexation: Changes in Award Total Wage and Minimum Wage**

Consumer Price Index		Award Wage Increase		Minimum Wage (a)	Date Operative
Quarter	Increase	Per cent		\$	
1975:					
March	3.6	3.6 per cent		male 79.60 female 71.60	15 May 1975
June	3.5	3.5 per cent		82.40	18 Sept. 1975
September	0.8	} 6.4 per cent		87.70	15 Feb. 1976
December	5.6				(b)
1976:					
March	3.0	3.0 per cent on award wages up to \$125 per week and \$3.80 per week on award wages above \$125.		95.50	15 May 1976
June	2.5	\$2.50 per week on award wages up to \$166 per week and 1.5 per cent on award wages above \$166.		98.00	15 Aug. 1976
September	2.2	2.2 per cent		100.20	22 Nov. 1976
December	6.0	\$5.70 per week		105.90	31 Mar. 1977

**Wage Indexation: Changes in Award Total Wage and Minimum Wage (continued)**

Consumer Price Index		Award Wage Increase	Minimum Wage (a)	Date Operative
Quarter	Increase	Per cent	\$	
1977:				
March	2.3	1.9 per cent on award wages up to \$200 per week and \$3.80 per week on award wages above \$200.	107.90	24 May 1977
June	2.4	2.0 per cent	110.10	22 Aug. 1977
September	2.0	1.5 per cent	111.80	12 Dec. 1977
December	2.3	1.5 per cent on award wages up to \$170 per week and \$2.60 per week on award wages above \$170.	113.50	28 Feb. 1978
1978:				
March	1.3	1.3 per cent	115.00	7 June 1978
June	2.1	} 4.0 per cent	119.60	12 Dec. 1978
September	1.9			
December	2.3	} 3.2 per cent	123.40	27 June 1979
March	1.7			
June	2.7			
September	2.3	} 4.5 per cent	129.00	4 Jan. 1980

(a) From the beginning of the pay period which included 30 June 1975 the adult male and female minimum wage were equalised.

(b) Minimum wage further increased to \$92.70 from 1 April 1976.

Following a conference of parties the Commission held an inquiry in 1978 into the wage fixation principles. In a decision in September 1978 it announced variations to the principles including the reduction of the periodicity of wage hearings from quarterly to six monthly with sittings to be held in April and October following the publication of the Consumer Price Index for the March and September quarters. Another significant change was to allow applications for the indexing of over-award payments.

**State Wage Fixation**

For many years award fixation in South Australia was based on a living wage plus a margin for skill but, since September 1975 wages have been fixed on the basis of a total wage. Likewise, for many years the Full Commission granted flow-ons of the Commonwealth national wage determinations annually but as from May 1975, the concept of quarterly wage indexation was introduced. In December 1975, the Full Commission adopted the Commonwealth wage indexation guidelines but reserved the right to deal with anomalous situations outside the scope of wage indexation and in June 1976 it ruled that under State awards service payments, leading hand rates and other special allowances should be included in the ordinary rates to which indexation rises apply.

On 19 December 1978 the Full Commission heard and granted the first wage increase based on the new six-monthly hearings in lieu of the previous three-monthly hearings. In April 1979 the revised principles allowing wage increases to rectify inequities of different employees doing similar work for dissimilar pay were adopted. In addition a new 'unusual or extra-ordinary circumstances' clause was inserted, providing for pay

increases outside indexation where the Commission accepts there is a pay anomaly whereby reason of unusual or extraordinary circumstances there are compelling reasons for the making of a one-time adjustment to found a fair and proper basis for the ongoing application of indexation adjustments.

In 1967 the concept of a minimum wage for adults was introduced into State awards and this has been the same as the minimum wage in Commonwealth awards as shown in the previous table.

Under the Industrial Commission Jurisdiction (Temporary Provisions) Act, 1975-1976 the Commission and Conciliation Committees are empowered to have regard to and may apply and give effect to any principles, guidelines or conditions enunciated or laid down by the Australian Conciliation and Arbitration Commission as modified by the South Australian Full Commission. Under this Act no industrial agreement providing for an increase in remuneration can be registered until the Commission certifies that it is not against the public interest, having regard to any principles, guidelines or conditions laid down by the Full Commission.

Applications for awards and variations to awards are commenced by summons filed in the Registry. The President usually assigns the application to a member of the Commission for hearing and determination.

Proceedings before Conciliation Committees are commenced by requisition to the Chairman of the Committee. Conciliation Committees have power to make awards by way of 'round table' discussion and conciliation rather than by a first instance resort to an arbitral tribunal. If the Committee cannot agree to a matter then the Chairman refers the matter to a normal Commission hearing before himself for arbitration and eventual decision.

At the end of 1979 there were 145 State Awards and 38 Conciliation Committee awards in existence.

### **Equal Pay**

In a decision handed down on 15 December 1972, the Full Bench of the Australian Conciliation and Arbitration Commission decided to enlarge the concept of 'equal pay for equal work' to that of 'equal pay for work of equal value', *i.e.* award rates for all work should be considered without regard to the sex of the employee. The new principle is applied to all awards of the Commission. However, it was considered that the social and economic consequences of the decision would be wide-ranging and so under normal circumstances implementation would take place by three equal instalments so that one-third of any increase was payable no later than 31 December 1973, half of the remainder by 30 September 1974 and the balance by 30 June 1975. Under principles established in 1969, equal pay was to be given for equal work and the decision was not intended to rescind those principles under which females could become entitled to equal pay earlier than they would under the December 1972 decision.

In the 1972 decision, the Commission rejected the claim that adult females be paid the same minimum wage as adult males because of the family considerations involved in male minimum wages. However, in the 1974 National Wage Case the Commission discarded the family component concept and decided to extend the male minimum wage to females in three stages, the rates for both males and females becoming equal from the beginning of the pay-period in which 30 June 1975 occurred.

Following an amendment to the Industrial Conciliation and Arbitration Act in September 1975, the concept of a separate State living wage for both males and females was

abolished by a decision of the Full Bench of the South Australian Industrial Commission handed down on 15 December 1975.

A historical discussion on the relativities of male and female wage rates was included on pages 290-2 of the *South Australian Year Book* 1970.

### Award Wages

The minimum weekly amounts provided in awards, determinations, and registered agreements under Commonwealth and State jurisdiction are known as award rates. The amounts shown in the following tables are a weighted average of minimum weekly wage rates payable to adult males and females in South Australia. Generally these are award rates; however, in a few cases where unregistered agreements are dominant in a particular industry, rates prescribed therein are used. The amounts shown should not be regarded as actual current averages, but rather as indexes expressed in money terms. The minimum rates used are for representative occupations within each industry, the weights for each occupation and industry being based on sample surveys conducted in 1954, with allowance made where necessary for subsequent changes in the industrial structure. Because of coverage difficulties rural industries are excluded. The statistics are designed to show movements in minimum wages as distinct from salaries, with the result that those awards, etc. which relate solely or mainly to salary earners have been excluded.

In the next table weighted average minimum weekly wage rates for males and females are shown for individual industrial groups.

**Weekly Wage Rates: Industrial Groups, South Australia<sup>(a)</sup>**  
**At 31 December**

Industrial Group	1975	1976	1977	1978	1979
Dollars					
ADULT MALES					
Mining and quarrying .....	112.03	127.33	142.40	152.81	157.44
Manufacturing:					
Engineering, metal work, etc. ....	110.71	126.86	140.26	153.38	162.79
Textiles, clothing and footwear .....	107.35	123.37	135.60	145.49	150.14
Food, drink and tobacco .....	110.46	127.16	140.40	151.01	157.26
Sawmilling, furniture, etc. ....	107.12	122.87	135.65	145.49	150.16
Paper, printing, etc. ....	118.95	137.40	150.99	161.39	166.54
All manufacturing groups .....	110.91	127.43	140.74	152.78	160.63
Building and construction .....	127.65	144.54	158.00	173.92	180.03
Railway services .....	107.38	122.84	135.51	148.95	153.69
Road and air transport .....	112.52	129.18	142.61	155.37	161.72
Shipping and stevedoring .....	138.80	157.57	172.21	184.94	191.66
Communication .....	140.52	159.70	174.72	185.69	196.52
Wholesale and retail trade .....	112.35	131.82	145.79	158.78	164.31
Public authority (n.e.i.) and community and business services .....	111.46	129.16	142.35	152.16	157.00
Amusement, hotels, personal services, etc. ....	105.47	121.06	133.78	143.01	147.57
All industrial groups .....	115.13	132.20	145.69	158.37	165.30
ADULT FEMALES					
Manufacturing:					
Engineering, metal work, etc. ....	99.00	121.89	134.59	146.38	154.55
Textiles, clothing and footwear .....	101.43	118.67	133.04	142.87	147.45
Food, drink and tobacco .....	99.07	121.31	136.39	146.03	151.33
Other manufacturing .....	100.56	121.45	134.15	143.79	149.17

**Weekly Wage Rates: Industrial Groups, South Australia<sup>(a)</sup>**  
**At 31 December (continued)**

Industrial Group	1975	1976	1977	1978	1979
Dollars					
ADULT FEMALES					
All manufacturing groups .....	100.03	120.98	134.38	144.77	150.82
Transport and communication .....	113.16	132.10	145.26	153.68	158.59
Wholesale and retail trade .....	106.22	131.97	145.95	156.41	161.35
Public authority (n.e.i.) and community and business services .....	104.85	122.81	141.33	150.90	155.59
Amusement, hotels, personal services, etc.	99.98	116.90	129.94	138.93	143.38
All industrial groups .....	103.34	125.11	139.06	149.13	154.45

(a) Weighted average minimum weekly rates payable for a full week's work (excluding overtime) as prescribed in awards, determinations and agreements. Excludes rural industries.

Classified as Commonwealth are awards of, or agreements registered with, the Australian Conciliation and Arbitration Commission and the Coal Industry Tribunal, and determinations of the Commonwealth Public Service Arbitrator. Incorporated under the State heading are awards or determinations of, or agreements registered with, State industrial tribunals, together with any unregistered agreements used in the computations.

**Weekly Wage Rates, South Australia<sup>(a)</sup>**

31 December	Rates of Wage				Index Numbers	
	Commonwealth Awards		State Awards		All Groups (Base: Australia 1954 = 100) (b)	
	Adult Males	Adult Females	Adult Males	Adult Females	Adult Males	Adult Females
Dollars						
1975 .....	117.57	103.82	109.07	103.02	407.6	519.1
1976 .....	134.03	119.67	127.68	129.70	468.1	631.0
1977 .....	147.40	133.20	141.46	143.08	515.9	698.5
1978 .....	161.20	143.26	151.37	153.15	560.8	749.1
1979 .....	168.36	149.09	157.72	158.12	585.3	775.8

(a) Weighted average of minimum weekly rates payable for a full week's work (excluding overtime) as prescribed in awards, determinations and agreements. Excludes rural industries.

(b) The index numbers refer to the weighted average minimum weekly wage rates of all awards.

**EARNINGS**

Figures given in the first series in this section are derived from particulars of employment and wages and salaries recorded on payroll tax returns, from other direct returns and from estimates of the unrecorded balance. The figures represent average weekly earnings of civilian male (whether adult or junior, full-time or part-time) wage and salary earners and include award wages, salaries, overtime earnings, over-award and bonus payments and payments made in advance or retrospectively during the period.

Particulars of wages and salaries are not available for males and females separately from the sources used for this series; average earnings have therefore been calculated by

using total civilian employees expressed in terms of 'male units'. Male units represent total male employees plus a proportion of female employees based on the approximate ratio of female to male average earnings.

**Average Weekly Earnings per Employed Male Unit, South Australia**

Year	September Quarter	December Quarter	March Quarter	June Quarter	Year
1974-75 .....	129.80	141.80	137.40	145.30	138.60
1975-76 .....	148.10	163.70	154.40	167.60	158.50
1976-77 .....	175.00	182.80	172.80	187.40	179.50
1977-78 .....	195.90	199.40	190.20	203.90	197.40
1978-79 .....	206.90	211.70	207.20	215.50	210.30
1979-80 .....	223.50	230.10	229.50		

As quarterly figures are affected by seasonal influences, comparisons for trends should be made by relating complete years or corresponding quarters. Because of variation in coverage, etc. these figures cannot be related to the minimum weekly wage rates shown in the preceding section. Finally, because of recent revisions to the civilian employees estimates (refer to the section on Civilian Employees, page 309), revised estimates for the above series back to the September 1971 quarter are expected to be available shortly.

Separate estimates of the average weekly earnings of males and females, and of adults and juniors, shown in the next table, have been obtained from sample surveys conducted in the last pay-period of October for each year since 1972.

**Average Weekly Earnings: Private and Government Employment  
South Australia<sup>(a)</sup>**

October	Adult Males					
	Overtime (b)	Ordinary Time	Total	Junior Males	Adult Females	Junior Females
Dollars						
1975 .....	9.80	144.60	154.40	85.00	125.20	79.00
1976 .....	12.50	166.30	178.80	97.60	151.10	96.70
1977 .....	12.30	183.50	195.80	109.70	169.90	109.90
1978 .....	14.50	194.90	209.50	115.50	178.70	116.30
1979 p .....	17.30	211.30	228.70	132.60	191.00	119.00

(a) Full-time employees other than managerial, executive, professional and higher supervisory staff.

(b) Average overtime for all employees in that category, whether or not they worked overtime.

The surveys were based on a sample selection of private employers subject to payroll tax and details of employees in non-government hospitals not subject to payroll tax, employees of Commonwealth and State Government departments, authorities and semi-government bodies and local government authorities. Employees in agriculture and domestic service were excluded as were those of religious, benevolent and similar organisations exempt from payroll tax.

As the estimates are based on a sample they may differ from the figures that would have been obtained from a full census of employers. For details of the standard errors involved and for more information on the survey, see *Earnings and Hours of Employees* (Catalogue No. 6304.0).

An indication of the likely distribution of earnings among employees is obtained from another employer based survey of Earnings and Hours of Employees. This survey is conducted in May of each year and a selected sample of employers complete individual returns for a random sample of their employees in accordance with instructions supplied by the Australian Bureau of Statistics.

The following table shows the estimated distribution of gross weekly earnings for a selected week in the month of May in 1978 and 1979. Earnings include one week's proportion of payments made other than on a weekly basis and excludes pay in advance, retrospective pay and annual or periodic bonuses.

**Distribution of Average Weekly Earnings of Employees, South Australia**

Weekly Earnings	Proportion of Employees			
	Males		Females	
	May 1978	May 1979	May 1978	May 1979
Under \$40 .....	4.9	2.3	7.4	5.9
\$40 and under \$80 .....		3.0	10.0	9.3
\$80 and under \$120 .....	4.8	3.3	15.5	13.9
\$120 and under \$160 .....	16.5	9.9	27.4	24.2
\$160 and under \$200 .....	30.0	29.1	24.3	28.1
\$200 and under \$240 .....	19.8	21.0		10.1
\$240 and under \$280 .....	11.6	12.9	15.5	
\$280 and under \$320 .....	5.5	7.2		
\$320 and over .....	6.9	11.2		8.6
Total .....	100.0	100.0	100.0	100.0
Dollars				
Median weekly earnings .....	191.10	204.10	146.90	155.40
Mean weekly earnings .....	201.70	216.90	142.90	152.40

Also shown are the mean and median earnings. The median earnings is the amount which divides the distribution into two equal groups, one having earnings above the median and the other having earnings below it.

The coverage of the sample of employers for this survey is similar to that of the survey conducted in October. For details of the standard errors involved and for more information on the survey, see *Earnings and Hours of Employees, Distribution and Composition* (Catalogue No. 6306.0).

Another indication of the likely distribution of earnings of all persons aged 15 years and over who were employed as wage or salary earners in their main job is obtained from the household based survey conducted in August in conjunction with the Labour Force Survey, see *Weekly Earnings of Employees (Distribution)* (Catalogue No. 6310.0).

#### HOURS OF WORK

The 40-hour week is generally the standard working week for employees under Commonwealth and State awards; however, the number of hours constituting a full week's work varies between occupations. Significant variations to this standard working week were achieved in the stevedoring industry during 1972 where a 70-hour fortnight

has operated from June 1975. Certain Commonwealth awards covering rural industries prescribe hours in excess of forty, while other occupations by tradition work less than forty hours, although forty hours is generally retained in their awards.

The weighted average standard hours (excluding overtime) prescribed in awards, determinations, and agreements for a full working week for adult male employees in all industries in South Australia, except rural, shipping, and stevedoring was 39.90 hours at 31 December 1978. This compared with 43.83 hours at 30 September 1947 immediately before the introduction of the 40-hour week. The weighted average for female employees at 31 December 1978 was 39.77 hours. The weighted average figure for South Australian male employees has not changed significantly since 1953, nor for females since 1951. The normal working day in manual trades is of eight hours duration, and employees working beyond these hours are paid penalty rates.

The following table shows the relative distribution of employed civilian wage and salary earners in South Australia according to the number of hours worked in a specified week, as recorded in the August Labour Force Surveys. The distribution is based on actual hours worked, including overtime, rather than hours paid for, and is therefore affected by public holidays, leave, absenteeism, temporary absence from work because of sickness, accident and industrial disputes, and work stoppages caused by plant breakdowns and weather.

#### **Employed Wage and Salary Earners: Hours Worked, South Australia<sup>(a)</sup>**

August	Proportion who Worked the Following Hours in the Specified Week							Total
	0	1-29	30-34	35-39	40	41-48	49 and Over	
Per cent								
1976 .....	6.1	13.3	4.9	14.3	43.2	10.9	7.3	100.0
1977 .....	4.6	15.1	4.3	15.2	42.5	10.6	7.7	100.0
1978 .....	3.9	17.8	6.4	17.0	33.2	13.2	8.5	100.0
1979 .....	4.6	18.0	6.6	15.0	33.6	13.8	8.5	100.0

(a) Employed civilian population, fifteen years of age and over.

#### **HOLIDAYS AND LEAVE**

##### **Public Holidays**

A number of days are observed each year throughout the State as public holidays and additional days may be proclaimed either on a State-wide basis or applicable to particular localities. Employees required to work on public holidays normally receive an extra day's pay and are paid at penalty rates. From 1971 authorised public holidays are:

New Year's Day (1 January or the following Monday if that day falls on a Saturday or Sunday),

Australia Day (first Monday after 25 January),

Good Friday,

Easter Saturday,

Easter Monday,

Anzac Day (25 April or the following Monday if 25 falls on a Sunday),

Adelaide Cup Day (third Monday in May),  
Queen's Birthday (usually observed on a Monday early in June),  
Labour Day (second Monday in October),  
Christmas Day (25 December or the following Monday if 25 falls on a Saturday or Sunday), and  
Proclamation Day (28 December or the following Monday if 28 falls on a Saturday or Sunday).

The Holidays Act, 1910-1975 makes provision for other days to be proclaimed in lieu of the authorised holidays. Additional holidays may also be proclaimed.

#### **Annual Leave**

Under Commonwealth awards generally, four weeks annual recreation leave is granted to employees who have completed twelve months continuous service. Commonwealth public servants were granted four weeks annual recreation leave from 1 January 1973.

Under State awards the Commonwealth standard of four weeks annual recreation leave has generally been adopted. The State Industrial Commission is empowered to determine a general standard of annual leave for all employees not bound by an award although no such standard has yet been finally determined.

Employees of the South Australian Public Service are entitled to four weeks annual recreation leave. However, with the exception of some employees engaged in essential services, *e.g.* hospitals, motor vehicle registrations, etc., State public servants are required to take three days of their recreation leave between the Christmas and New Year holidays.

Payment in lieu of annual leave or proportionate leave on termination of employment must be made to all employees, whether subject to an award or not, irrespective of the reason for, or manner of, termination of the employment.

Certain employees in special occupations or where regular shift work is involved *e.g.* police officers, nurses, etc., are entitled to annual recreation leave in excess of four weeks.

In 1973 the State Industrial Commission handed down a decision which enabled part-time workers, when taking annual leave, to be paid the normal weekly wage that they would have received had they been at work.

In addition to normal holiday pay many employees receive an annual leave bonus of 17.5 per cent of the payment they would have received had they not been on leave. Officers of the South Australian and the Commonwealth Public Service receive a 17.5 per cent leave loading on their salary up to a maximum of average weekly earnings for the March quarter of the year ending in June in which the leave accrued in the case of the South Australian Public Service and the September quarter of the year ending in December in which the leave accrued in the case of the Commonwealth Public Service.

#### **Sick Leave**

The Industrial Conciliation and Arbitration Act, 1972-1979 provides that all full-time employees whether bound by an award or not, shall be eligible to receive annually not less than ten days cumulative sick leave on full pay. Most Commonwealth awards provide for two weeks sick leave a year.

#### **Long Service Leave**

In 1964 the Australian Conciliation and Arbitration Commission included, for the first time in a Commonwealth award, long service leave, granting employees in the graphic

arts and metal trades industries leave on the basis of thirteen weeks for twenty years service in respect of employment before the date of the decision, and eight and two-thirds weeks in respect of each ten years of subsequent service; these provisions have been extended to many other Commonwealth awards. In a number of other cases, registered agreements provide for thirteen weeks leave after fifteen years service.

The South Australian Long Service Leave Act, 1967-1972 entitles employees, in respect of continuous service after 1 January 1972, to thirteen weeks leave for each ten years service. In respect of service before 1 January 1972 the entitlement is calculated at the rate of thirteen weeks for fifteen years service for the period 1 January 1966 to 31 December 1971 and at the rate of thirteen weeks for twenty years service for the employment period up to 31 December 1965. The obligation to grant leave is imposed on all employers in South Australia except in regard to employees entitled to long service leave pursuant to an award of the Australian Conciliation and Arbitration Commission. The Industrial Commission has the power to exempt an employer from the provisions of the Act where the employees involved have access to benefits not less favourable than those prescribed by the Act. Other provisions of the Act relate to payment for leave, deferment of leave, claim for leave on termination of employment, and notice of granting of leave.

State and local government employees are in general entitled to ninety calendar days leave after ten years service which equates to 9 days leave per year, and Commonwealth Government employees to three months after ten years service. However, as from 1 July 1975, State public servants with over fifteen years continuous service accumulate long service leave benefits at the rate of 15 days leave per year for each year of service after the fifteenth. The long service leave provisions which apply to State public servants are also extended to teachers employed under the Education Act.

The various long service leave arrangements provide for additional *pro rata* periods of leave for service in excess of the minimum, and for *pro rata* payments for employees who have completed a specified term of service but who, through the termination of their services or through death, do not complete the full entitlement period.

#### **Maternity and Paternity Leave**

Since 1973 the Commonwealth Public Service has provided maternity leave for its female employees whether permanent or temporary. The current provision is for twelve weeks paid leave and up to fifty-two weeks leave in total in respect of each confinement. A qualifying period applies for the paid leave. Paternity leave not exceeding one week was also provided for males but was withdrawn in 1979.

Maternity leave provisions also exist for female employees of the South Australian Public Service. The maximum special leave without pay is fifty-two weeks but leave on full pay to which the officer has an entitlement may be substituted for the special leave.

There are provisions in the Education Act for maternity leave for teachers in the South Australian Education Department with the maximum leave being fifty-eight weeks and the minimum fourteen weeks although these limits may be respectively extended or reduced in special circumstances. Leave is taken without pay except when long service credits are used.

During 1979 maternity leave provisions were inserted in some South Australian awards. The South Australian provisions are based on those granted in March 1979 by the Australian Conciliation and Arbitration Commission for Commonwealth awards. The provisions allow women employed full-time or part-time by a firm, and with not less than twelve months continuous service, to take a minimum of six weeks or a maximum of fifty-two weeks maternity leave. The leave is unpaid and seasonal and casual workers are not eligible.

## 7.4 INDUSTRIAL SAFETY

### SAFETY REGULATIONS AND INSPECTION

General principles on safety, health and welfare applicable to all employed persons in industry (primary as well as secondary), commerce and in State Government are contained in the Industrial Safety, Health and Welfare Act, 1972-1978. It authorises the making of detailed provisions by regulations for different industries and different processes. The Act is progressively coming into operation for different industries as regulations are prepared. The Construction Safety Regulations, 1974-1977 were the first to be prepared and apply to persons employed on building and construction sites. They came into force on 1 April 1974 and revoked all regulations made under the Construction Safety Act, 1967. The Rural Industries (Machine Safety) Regulations, 1975 and the Power Driven Machinery (Safety) Regulations, 1975 came into effect on 1 January 1975. The Industrial Safety Code Regulations, 1975-1976, dealing with factories and workshops came into effect on 1 September 1975. On 6 October 1977, the Logging Industry Safety Regulations, 1977 came into effect and were followed on 1 October 1978 by the Commercial Safety Code Regulations covering shops, offices, warehouses and places where meals or refreshments are served.

At present most of the legislation directed at industrial safety is administered by the Department of Industrial Affairs and Employment, although other authorities hold responsibilities in certain fields.

#### *Department of Industrial Affairs and Employment*

The general working conditions in industrial premises (factories, shops, offices and warehouses) are regulated by the Industrial Safety Code Regulations and the Commercial Safety Code Regulations. Inspections are made by Departmental officers to ensure that the requirements of the Safety Regulations with respect to safeguarding of machinery, safety of processes, cleanliness and general working conditions on industrial premises are being observed.

The registration and inspection of steam boilers and other pressure vessels is provided for under the Boilers and Pressure Vessels Act, 1960-1978. The Lifts and Cranes Act, 1960-1978, regulates the use of lifts, escalators, cranes and hoists, and requires the Department to approve new installations and to inspect regularly existing lift equipment. The Inflammable Liquids Act, 1961-1976, and the Liquefied Petroleum Gas Act, 1960-1973, regulate the storage and carriage of these products.

#### *Department of Mines and Energy*

Regulations under the Mines and Works Inspection Act, 1920-1978 provide for the health and safety of persons engaged in mining, quarrying or associated treatment plants and for the protection of the general public. Mining sites and camps must be maintained in safe condition with specific attention given to ventilation, sanitation, the use of explosives and the protection of the area amenity and environment. All mining operators are required to achieve some form of rehabilitation of areas disturbed by mining. The legislation includes operations conducted by local government authorities and road and rail construction authorities.

Officers of the Department inspect mines and quarries; ensure there is no undue impairment of the environment; check old workings; investigate mining accidents and complaints associated with mining activities; and give advice to industry on matters pertaining to mining and explosives.

*South Australian Health Commission*

Health aspects of industrial safety are the responsibility of the Occupational Health Branch of the Health Commission. The Commission investigates health hazards resulting from the presence of toxic and noxious substances in industry, both on its own initiative and on reference from employers, unions, other authorities, and individuals. Hazards investigated include chemicals and such physical agents as noise, heat and radiation, including the use of radio-active substances and irradiating apparatus for industrial, scientific, or medical purposes.

*Department of Services and Supply (Chemistry Division)*

The Explosives Act, 1936-1974 regulates the importation, manufacture, carriage, storage, and sale of explosives. The Chemistry Division is responsible for the maintenance of government magazines and the licensing and inspection of magazines. Vehicles used in the carriage of explosives are also licensed. Commercial explosives entering the State are inspected by the Division.

*Electricity Trust of South Australia*

Consumers' electrical installations are required to conform to the service rules of the Electricity Trust and the wiring rules of the Standards Association of Australia, and are subject to inspection by Trust officers. Persons engaged in installation, maintenance or repair of electrical installations and permanently connected equipment must be licensed to do this work in accordance with the provisions of the Electrical Workers and Contractors Licensing Act, 1965-1966. Under the Electrical Articles and Materials Act, 1940-1967 certain classes of electrical articles and materials may only be sold or hired or offered for sale or hire if they are of a type approved by the Trust or a recognised interstate authority.

## WORKERS COMPENSATION

**Legislation**

Provisions describing assistance for workers sustaining personal injury out of or in the course of their employment are included in the Workers Compensation Act, 1971-1979. The provisions of the Act extend to injuries arising out of or in the course of employment and cover accidents during recess periods, travelling to or from work, travelling to or from or while in attendance at a place of pick up, travelling to or from or attending a trade or technical school, travelling for a medical certificate or medical treatment while on compensation or travelling to seek or receive compensation.

An injury may be physical or mental, including diseases contracted and the aggravation or recurrence of an injury or disease and a pre-existing coronary heart disease.

Compensation is payable when the injury results in death, or in total or partial, permanent or temporary incapacity. Where death results from the injury, the Act provides for payment to members of the family wholly or partly dependent on the earnings of the deceased. For full dependants, compensation will be an amount equal to the sum of the worker's earnings in the six years before the accident plus \$500 for each dependent child, with a minimum of \$8000 and a maximum of \$25 000 (plus \$500 per dependent child), as well as funeral expenses to a maximum of \$500. If the worker has not been in the same employment for six years the amount will be his average weekly earnings in the job at which he was working at the time of the accident multiplied by 312, with the above maxima and minima. Where a worker dies leaving no dependants, compensation covering medical, funeral (\$500 maximum) and other expenses will be paid into the estate.

Where the injury does not result in death, the most common form of compensation is weekly payment. If incapacity is for one week or more compensation is an amount equal to average weekly earnings during the twelve months preceding the incapacity. The maximum liability of an employer is \$18 000, unless the worker is totally and permanently incapacitated, when it is \$25 000 or such greater amount as may be fixed by the Court having regard to the special circumstances of the case. Weekly payments must begin within two weeks of the worker providing the employer with a medical certificate and his declaration in the correct form stating that he believes himself entitled to compensation. Payments must be made to the worker on his usual pay days.

Provision is made for lump sum payments in lieu of weekly payments. Such payments are arranged by agreement or by proceedings in the Industrial Court of South Australia on application of either employer or employee.

Lump sum payments are payable for certain specified injuries *e.g.* loss of limbs, for permanent injuries which may involve total or partial incapacity for work whether actual or potential *e.g.* speech or hearing loss, or no incapacity for work *e.g.* severe facial scarring.

In addition to other compensation reasonable medical, hospital, nursing, constant attendance, rehabilitation and ambulance expenses are paid and compensation is provided to \$150 for loss or damage to clothing and personal effects and \$300 for loss or damage to tools of trade.

Excluded from the scope of the Act are members of the crews of fishing vessels remunerated by a share in the profits or the gross earnings of the working of such vessels, certain persons who are contestants in sporting or athletic activities, service personnel and Commonwealth Government employees. Compensation for employees of the Commonwealth Government is provided by the *Compensation (Commonwealth Government Employees) Act 1971*.

#### Workers Compensation Insurance

The Workers Compensation Act requires every employer, unless specifically exempted, to obtain from a licensed insurance company a policy which fully covers his liability under the Act. The exemptions are the State Government, which provides its own cover through the State Government Insurance Fund, and any employer who can satisfy the Minister of Industrial Affairs of his ability to meet all probable claims and who is accordingly issued with a certificate of exemption.

During 1977-78, approximately 66 500 claims were lodged under the Workers Compensation Act, 1971-1974, and compensation payments totalling \$54.5 million were made for wages lost, hospital and medical expenses and lump sum settlements. Further details may be obtained from the bulletin *Industrial Accidents 1977-78* (Catalogue No. 6301.4) published by the South Australian Office of Australian Bureau of Statistics.

#### INDUSTRIAL ACCIDENTS

The statistics set out in this section have been compiled from reports of workers' compensation claims closed during the year ended 30 June 1978 and of unclosed claims of three years duration at 30 June 1978. Reports are submitted by insurance companies, self-insurers, and State Government departments, through the South Australian Department of Industrial Affairs and Employment.

For the purpose of this collection an 'industrial accident' is defined as a compensated work injury causing the absence of the injured person from work for one week or more but excluding disease cases (for which separate statistics are available) and accidents during journey or recess periods if the victim is not engaged in normal occupational duties. 'One week' is interpreted as one week of seven calendar or five working days.

Because of a continuing problem of inadequate reporting no statistics of fatal accidents are available for 1977-78.

Although the term 'industrial accident' is used, the statistics represent workers' compensation claims finalised during the year ended 30 June 1978. The accidents, to which the claims refer, may have occurred in the year the claim was finalised or during any other year within the coverage of the current collection, i.e. within the previous three financial years. For accidents and diseases which occurred during the period 1 July 1974 to 30 June 1975 and for which the claims had still not been finalised by 30 June 1978, estimates of amounts yet to be paid and future time lost are included in the statistics; however, there is evidence that the timely reporting of such unclosed claims is incomplete.

Each original claim has been regarded as a separate accident and although reports have been received of re-opened claims, no details of these have been included in the tables which follow.

Only persons within the coverage of the South Australian Workers Compensation Act, 1971-1974 are included. Notable exclusions are self-employed persons (although following a change in legislation persons supplying labour only in contracts have been included from 1 January 1974) and all Commonwealth Government officers and employees.

The exclusion of self-employed persons is likely to have considerable effect in industries where self-employment is significant (e.g. retail trade, rural industries). Because of the exclusion of Commonwealth Government employees, defence services and Government communications industry groups are not covered, while coverage is reduced in other industries (e.g. building and construction). Because of the movement of employees across State boundaries some reports received may refer to accidents occurring in States other than South Australia. The number of such reports is thought to be negligible.

Industrial accident statistics are industry classified by use of the 1969 Preliminary Edition of the *Australian Standard Industrial Classification* (ASIC).

During 1977-78, 13 190 non-fatal accident claims each involving lost time of one week or more were reported as finalised: total time lost as a result of those accidents was slightly less than 74 800 weeks (approximately 1 550 man-years of working time).

#### Non-fatal Accidents: Industry Groups, Number, Time Lost and Amount Paid South Australia, 1977-78

Industry	Accidents		Time Lost		Amount Paid (a)	
	Number	Percentage Of Total	Total	Average	Total	Average
Weeks						
Agriculture, forestry, fishing and hunting .....	672	5.1	3 332.2	5.0	934.3	1 390
Mining .....	134	1.0	591.2	4.4	226.8	1 692
 Manufacturing:						
Food, beverages and tobacco .....	1 276	9.7	5 752.8	4.5	1 629.9	1 277
Wood, wood products and furniture .....	357	2.7	1 445.4	4.0	448.5	1 256
Glass, clay and other non-metallic mineral products .....	332	2.5	2 293.8	6.9	768.8	2 316

**Non-fatal Accidents: Industry Groups, Number, Time Lost and Amount Paid  
South Australia, 1977-78 (continued)**

Industry	Accidents		Time Lost		Amount Paid (a)	
	Number	Percentage Of Total	Total	Average	Total	Average
Basic metal products ..	510	3.9	2 464.2	4.8	1 038.5	2 036
Fabricated metal products .....	626	4.7	2 554.6	4.1	881.9	1 409
Transport equipment ..	989	7.5	7 390.4	7.5	2 242.0	2 267
Other industrial machinery etc., and household appliances	735	5.6	4 262.4	5.8	1 283.3	1 746
Other .....	620	4.7	3 129.0	5.0	1 089.8	1 758
Total manufacturing	5 445	41.3	29 292.6	5.4	9 382.8	1 723
Electricity, gas and water	215	1.6	1 409.6	6.6	376.1	1 749
Construction .....	2 411	18.3	14 075.8	5.8	4 028.3	1 671
Wholesale and retail trade	1 576	11.9	7 571.2	4.8	2 016.0	1 279
Transport, storage and communication .....	929	7.0	6 001.8	6.5	1 549.6	1 668
Finance, insurance, real estate and business services .....	110	0.8	743.4	6.8	228.0	2 073
Public administration .....	63	0.5	547.4	8.7	178.1	2 828
Community services .....	1 246	9.4	8 173.2	6.6	1 973.0	1 583
Entertainment, recreation, restaurants, hotels and personal services .....	389	2.9	3 039.8	7.8	856.9	2 203
Total .....	13 190	100.0	74 778.2	5.7	21 749.9	1 649

(a) Compensation for wages lost, hospital and medical expenses, and lump sum settlements.

In the following table industrial accidents are allocated to an accident factor; this being the underlying agency, other than human failing, which appeared to contribute most materially to the accident.

**Non-fatal Accidents: Industry Groups, Accident Factor, South Australia, 1977-78**

Industry	Machinery, Vehicles	Falling, Stumbling, Slipping, Stepping On, Etc.	Handling	Objects Moving or Falling	Total	
					Other(a)	
Agriculture, forestry, fishing and hunting .....	137	168	129	43	195	672
Mining .....	34	26	25	17	32	134
Manufacturing .....	780	1 189	1 813	614	1 049	5 445
Electricity, gas and water	10	54	71	34	46	215
Construction .....	224	744	712	283	448	2 411
Wholesale and retail trade	169	437	508	141	321	1 576

**Non-fatal Accidents: Industry Groups, Accident Factor, South Australia, 1977-78  
(continued)**

Industry	Machinery, Vehicles	Falling, Stumbling, Slipping, Stepping On, Etc.	Handling	Objects Moving or Falling	Other(a)	Total
Transport, storage and communication .....	137	335	237	142	78	929
Finance, insurance, real estate and business services .....	6	50	24	8	22	110
Public administration .....	8	18	17	4	16	63
Community services .....	75	386	441	54	290	1 246
Entertainment, recreation, restaurants, hotels and personal services .....	26	125	94	28	116	389
Total .....	1 606	3 532	4 071	1 368	2 613	13 190

(a) Includes electricity, explosions, hand tools, harmful substances etc.

The following table indicates the distribution of non-fatal accidents for 1977-78 by nature and location of injury.

**Non-fatal Accidents: Nature and Location of Injury, South Australia, 1977-78**

Nature of Injury	Head (Including Eye)	Neck and Spine	Trunk	Arm and Hand	Leg and Foot	Total (Including Other)
Bruising, contusion and superficial injury .....	96	44	389	722	835	2 089
Lacerations .....	121	1	26	1 573	314	2 035
Foreign bodies .....	191	—	—	—	—	191
Burns and scalds .....	72	2	28	164	114	380
Fractures .....	44	31	112	534	403	1 124
Dislocations .....	—	103	6	53	13	175
Sprains, strains, hernias ...	—	648	3 521	1 401	1 274	6 844
Traumatic amputations ....	—	—	—	91	5	96
Concussion .....	86	—	—	—	—	86
Enucleation .....	1	—	—	—	—	1
Internal injury .....	—	—	12	—	—	12
Nerve injury .....	11	11	5	41	8	76
Other and unspecified .....	8	—	1	4	3	81
Total .....	630	840	4 100	4 583	2 969	13 190

**Industrial Diseases**

The International Labour Office distinguishes an occupational disease from a work injury in that it exhibits one or more of the following characteristics:

- (1) the slow and protracted nature of its cause;
- (2) its ascribability to repeated or continuous action of a mechanical, physical or

chemical cause; it is not the effect of a single event but of a cause acting imperceptibly and constantly;

- (3) indeterminateness of the time of its beginning due to its slow and insidious development;
- (4) the possible importance of individual predisposition as a factor in the development of the pathological conditions.

Where there is any evidence at all that a disease has resulted from an initial injury, the episode is classified as an injury rather than a disease. On the other hand, disabilities caused purely by continuous movement of a joint are treated as a disease.

The problem of inadequate reporting of fatal accidents extends also to the reporting of fatal disease cases and as a consequence no statistics of fatal diseases are available for 1977-78.

#### Non-fatal Diseases: Number, Time Lost and Amount Paid, South Australia, 1977-78

Diseases	Number		Time Lost		Amount Paid	
	Males	Females	Males	Females	Males	Females
			Weeks		\$'000	
Infective and parasitic diseases .....	34	54	208.2	238.4	44.8	39.2
Diseases of the nervous system and sense organs	17	12	75.6	273.8	17.6	72.5
Diseases of the circulatory system:						
Arteriosclerosis and degenerative heart disease .....	21	1	679.0	8.6	150.4	2.9
Other .....	4	—	128.4	—	41.0	—
Diseases of respiratory system .....	7	—	109.4	—	44.0	—
Diseases of skin and cellular tissue:						
Occupational dermatitis	116	34	992.2	328.8	281.7	77.9
Other .....	26	9	110.6	138.8	20.5	36.7
Diseases of bone and organs of movement ....	60	39	399.2	199.4	127.1	53.4
Other .....	10	7	99.4	93.6	42.4	19.4
Total .....	295	156	2 802.0	1 281.4	769.6	301.8

#### Further References

Additional information may be found in the bulletin *Industrial Accidents* (Catalogue No. 6301.4) published by the South Australian Office of the Australian Bureau of Statistics.

## PART 8

# PHYSICAL DEVELOPMENT

## 8.1 WATER SUPPLY AND SEWERAGE

### WATER SUPPLY

Water conservation is of vital importance to South Australia as 96 per cent of the State receives less than 500 millimetres of rain a year, while high temperatures encourage a higher use of water and a high rate of evaporation causes heavy losses from reservoirs.

The Waterworks Act, 1932-1978 gives the Minister of Water Resources power to divert and impound the water from any streams or springs and take the water found in or under any lands for the purpose of constructing, completing, extending or maintaining any waterworks or for supplying water to or in any water district. The Act also gives the Minister power to declare any district, place or town a water district. The function of exploiting water resources is performed through the Engineering and Water Supply Department.

In 1973, the State Government announced its new water resources management policy. This statement embraced the same important principles contained in a document *Proposed National Approach to Water Resources Management*, being developed under the auspices of the Australian Water Resources Council and adopted by the Commonwealth and State Governments in 1976.

With the Water Resources Act coming into effect on 1 July 1976, the Control of Waters Act and Underground Preservation Act were repealed.

The Water Resources Act provides for the assessment, conservation, development

and management of the water resources of the State by the Minister of Water Resources and for the control and management of their utilisation, quality and other purposes.

Its provisions include the establishment of a South Australian Water Resources Council, Regional Water Resources Advisory Committees, the Water Resources Appeal Tribunal and a Well Drillers' Examination Committee. Six Regional Water Resources Advisory Committees, River Murray, Padthaway, Northern Adelaide Plains, Arid Areas, North Para and Angus-Bremer have been established.

The Water Conservation Act, 1936-1975 provides for the control of small reservoirs, bores, tanks etc. established in remote areas as emergency water supplies or to assist local development.

The following table gives details of water supplies in South Australia at 30 June for the three years to 1979.

#### Water Supplies, South Australia

At 30 June	Aggregate Capacity		
	1977	1978	1979
Adelaide Metropolitan Reservoirs .....	188 680	188 680	209 440
Country Reservoirs .....	34 310	34 310	34 310

It should be noted that storage includes service reservoirs, and that both natural and River Murray water are stored in Northern and Metropolitan Reservoirs. The Little Para Reservoir, opened in January 1979, is included for the first time. The total length of water mains at 30 June 1979 was 22 721 kilometres.

#### Water Filtration

The Hope Valley Water Filtration Plant commenced supplying filtered water to the Metropolitan Distribution System in November 1977.

Construction of the Anstey Hill Water Filtration Plant continued during the year and is expected to be completed during 1980. Work commenced on the Barossa Water Filtration Plant in the latter part of 1977 and is expected to be completed by late 1981.

#### DISTRIBUTION OF WATER RESOURCES

##### Drainage Systems

In agreement with the States, the Australian Water Resources Council has divided Australia into twelve surface water drainage divisions. The divisions which constitute major surface water resources for South Australia are the South Australian Gulf Drainage Division which lies wholly within the State and in which are located all important State reservoirs, and the Murray-Darling Division, of which only a part is located in South Australia, and the waters of which are allocated between this State, Victoria, and New South Wales in accordance with the terms of the River Murray Waters Agreement (see pages 345-6).

Part of the large Lake Eyre Drainage Division covers the northern and eastern areas of the State, but, although streams in the area may flood extensively on occasions, they are generally unreliable and significant only to the local pastoral industry. The section of the South-East Coast Drainage Division which intrudes into the south-east corner of South Australia has no good dam sites but a high rainfall in the area provides a good underground water resource of considerable importance to the State. Underground

resources on the seaward edge of the Western Plateau Division, which covers the south-western part of the State, are recharged also from local rainfall.

#### *South Australian Gulf Drainage Division*

The eastern boundary of this Division is formed partly by the Mount Lofty Ranges, which rise to a maximum of 727 metres east of Adelaide and to over 1 000 metres north of Burra, and further north it follows the Flinders Ranges which reach a height of 1 166 metres at St Mary Peak. The boundary then rounds Lake Torrens and, further south, the western boundary is formed by a discontinuous line of hills on Eyre Peninsula. Kangaroo Island is also included, so that in all, the Division covers the whole perimeter of the South Australian gulfs. The individual river basins in this Division are all very small.

Most of the South Australian reservoirs are situated in this Division as can be seen from the map on page 338. The Little Para Dam, constructed on the Little Para River north of Adelaide at a cost of \$11 million, began service in January 1979. The capacity of this reservoir is 21 400 megalitres and the waterspread is 125 hectares. The following table shows the capacity, area at full supply level and the catchment area of the eleven largest reservoirs at 30 June 1979.

**Major Reservoirs, South Australia, At 30 June 1979<sup>(a)</sup>**

Reservoir	Capacity	Area at Full Supply Level	Catchment Area
	Megalitres	Hectares	km <sup>2</sup>
South Para .....	51 300	444	228
Mount Bold .....	47 300	308	388
Myponga .....	26 800	280	124
Kangaroo Creek .....	24 400	121	289
Little Para Dam .....	21 400	125	83
Millbrook .....	16 500	178	233
Happy Valley .....	12 700	188	451
Tod River .....	11 300	134	196
Bundaleer .....	6 370	85	1 671
Baroota .....	6 140	63	136
Warren .....	5 080	105	119

(a) All reservoirs with a capacity in excess of 5 000 megalitres.

Rainfall in excess of 750 millimetres a year occurs only on a very small area in the Mount Lofty Ranges, while in the north-west of the Division the annual average is less than 150 millimetres. In the southern parts of the Division, average precipitation generally exceeds potential evaporation only from May to August, and over most of the Division monthly evaporation rates exceed rainfall throughout the year.

The average annual run-off in this Division at the lowest practical dam sites is estimated at 430 000 megalitres but is subject to considerable variation. The two best streams, the Onkaparinga and the Torrens, account for 135 000 megalitres of the average flow and the combined annual flow of these two has varied between 467 000 megalitres down to 8 600 megalitres in the last eighty years.

After the major dam sites in the Mount Lofty Ranges had been developed because of the small size of the individual catchments in the Division, and the relatively low run-off and its high variability, it was found more economical to provide additional water to Adelaide and other high demand centres via pipelines from the River Murray. However, as demand continues to rise and problems with the quality of the River Murray water increase, attention is being re-directed to further development of streams within the Division.

The present average annual extraction of water by the Engineering and Water Supply Department from the Gulf Drainage Division is about 120 000 megalitres; private diversion may take a further 13 000 megalitres.

### River Murray

The River Murray is the most important source of water supply for South Australia. Under the terms of the River Murray Waters Agreement (see pages 345-6), South Australia is entitled to 1 850 000 megalitres of water annually, subject to the declaration of restriction by the River Murray Commission. Losses by evaporation and seepage account for about 1 100 000 megalitres per annum. Over the past ten years, irrigation diversions have averaged 388 000 megalitres per annum and town, domestic, industrial and stock supplies have averaged 105 000 megalitres per annum. Town, domestic, industrial and stock supplies have been as high as 234 000 megalitres per annum.

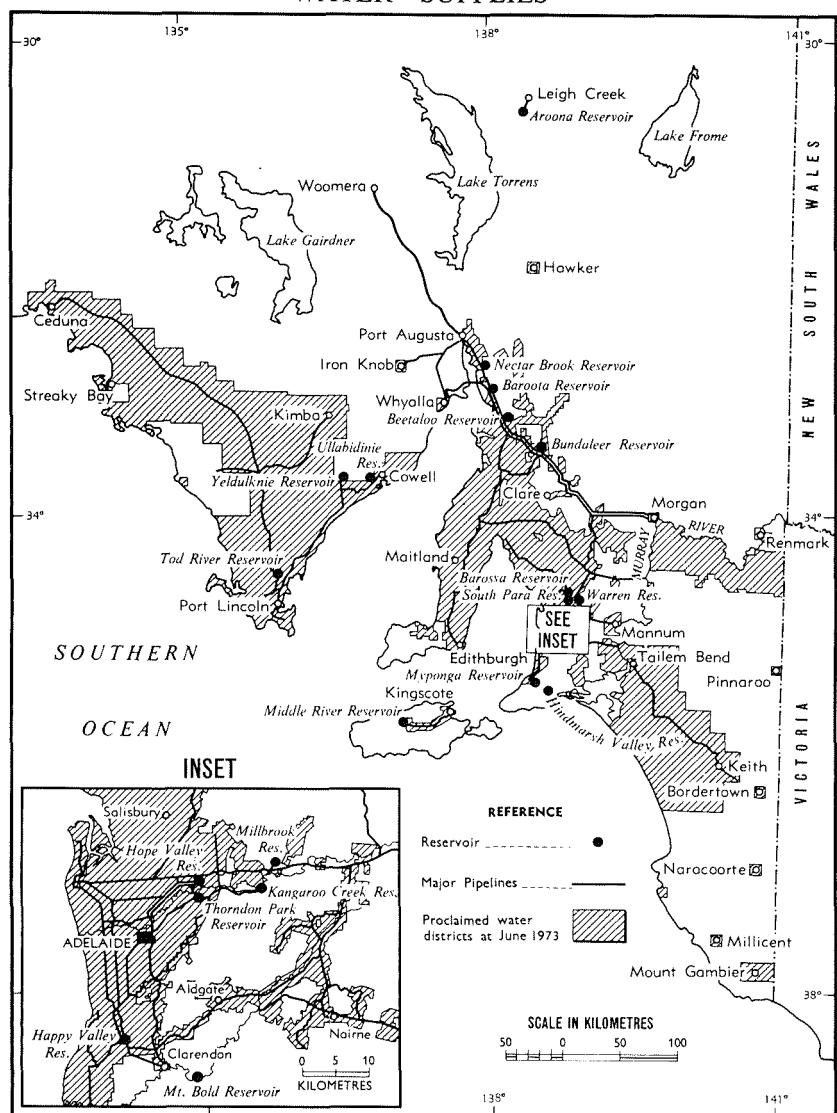
Adelaide metropolitan water supplies are supplemented by River Murray water through the Mannum-Adelaide and Murray Bridge-Onkaparinga pipelines. The Morgan-Whyalla, Swan Reach-Stockwell and Tailem Bend-Keith pipelines provide the water supply for extensive country areas or augment local resources in these areas. The first water pumped through the Mannum-Adelaide Pipeline reached the metropolitan system in 1954. The water is drawn from the River at Mannum nearly 67 kilometres in a direct line from Adelaide, and is raised by three pumping stations a total of 457 metres to a 137 megalitre summit storage near Tungkillo. At first the water flowed into the Torrens and Onkaparinga Rivers and hence into the metropolitan system; later the pipeline was extended to a terminal storage near Modbury. The Mannum-Adelaide Pipeline is also connected to the Warren Reservoir on the South Para River and branches serve many country areas *en route*.

A second large pipeline to augment the metropolitan supply was completed in 1973. The pipeline extends for 48 kilometres from the River Murray near Murray Bridge to the River Onkaparinga near Hahndorf, and the water is distributed through the reservoirs on the latter stream. Three pumping stations lift the water 418 metres over the first 40 kilometres of the pipeline to a summit storage from which an 8-kilometre gravity section of the line discharges into the Onkaparinga. A branch main supplies the town of Murray Bridge and other branch mains supply areas in the Mount Lofty Ranges.

The Morgan-Whyalla Pipeline, completed in 1944, includes four pumping stations which lift the water 478 metres over a distance of 92 kilometres from Morgan to a summit storage at Hanson. From here the water gravitates 267 kilometres *via* Port Augusta to Whyalla. Branch lines have been laid to Woomera (177 kilometres) and other country centres. The Morgan-Whyalla Pipeline, being an additional source of supply for the Bundaleer system, has permitted reticulation over most of Yorke Peninsula. A second main was completed in 1966 and apportioned works comprising additional storages and four new pumping stations were commissioned early in 1970. The second main which more than doubles the capacity of the scheme, parallels the original main to Baroota Reservoir, then extends westerly to Whyalla *via* a 12-kilometre undersea crossing of Spencer Gulf.

A 53-kilometre pipeline between Swan Reach and Stockwell which connects to the distribution section served by Warren Reservoir commenced operating in 1969 to supplement the supplies for lower northern areas from the Murray. A 143-kilometre pipeline between Tailem Bend and Keith completed in 1969 forms the backbone of a scheme involving 800 kilometres of branch mains subsequently laid to supply River Murray water to towns and farmlands in the Upper South East. The River Murray also supplies towns along its banks by means of direct pumping.

**PORTION OF SOUTH AUSTRALIA  
WATER SUPPLIES**



### Other Water Resources

#### Eyre Peninsula

Eyre Peninsula has no perennially flowing streams with the Tod River the only stream that can be relied upon in normal years to provide some flow of water. Underground basins, mainly in the southern portion of Eyre Peninsula provide most of the water supplies. Port Lincoln is supplied entirely with underground water available at shallow depth in the Lincoln Basin and Uley South Basin. The Uley-Wanilla Basin supplies Cleve and Cowell via the East Coast Main and also supplements the natural intake of the Tod Reservoir which was built in 1922 on a tributary of the Tod River.

A trunk main, 384 kilometres in length, from the Tod Reservoir to Ceduna and Thevenard was laid between 1923 and 1926 and a program of replacement and enlargement was completed in 1974. A 106-kilometre trunk main from Lock on the Tod Trunk Main supplies water to Kimba and intervening farmlands. This supply is augmented with water from the Polda underground basin.

#### South East

The hydrology of the South East covers a complex of surface and underground waters with up to 80 per cent of all water used derived from underground aquifers. The productivity of large areas of land has been greatly improved by the construction of a large drainage network as discussed on page 346.

Eight Mile Creek to the east of Port MacDonnell carries a permanent natural overflow from the springs of the Ewen Ponds area and discharges 68 000 megalitres a year into the Southern Ocean and there are other visible outlets. The Blue Lake now provides 4 000 megalitres annually to Mount Gambier. There is scope for considerable development in the South East and it is likely that up to 650 000 megalitres could be used annually from the underground water resources of the Region.

#### Other Underground Supplies

Many other areas of the State are dependent on underground supplies, particularly for stock drinking water. The aquifers of the North Adelaide Plains provide the major source of water for market gardens and related irrigation, but the demand level of 21 000 megalitres has been found to be beyond the permanent capability of the area. Usage is subject to Government control, and investigations on means of prolonging the life of the aquifers are in progress. Further discussion on underground water appears on pages 24-5.

#### Metropolitan Water Supply

In the following table, details of metropolitan services as well as revenue and expenditure are given for the metropolitan water supply district for the years 1974-75 to 1978-79.

**Adelaide Metropolitan Waterworks, South Australia**

Particulars (a)	1974-75	1975-76	1976-77	1977-78	1978-79
Length of mains (kilometres) .....	6 874	7 049	7 268	7 470	7 555
Number of services .....	285 125	293 644	302 817	308 728	313 410
Revenue:			\$'000		
Rates and excess water .....	22 072	28 771	33 602	38 462	43 960
Other .....	260	187	469	281	336
Total .....	22 332	28 957	34 071	38 743	44 296

**Adelaide Metropolitan Waterworks, South Australia (continued)**

Particulars (a)	1974-75	1975-76	1976-77	1977-78	1978-79
\$'000					
Expenditure:					
Working expenses .....	13 118	15 295	20 842	25 960	24 673
Interest .....	8 996	10 279	12 004	14 632	15 750
Total .....	22 114	25 575	32 846	40 592	40 423
Surplus .....	218	3 383	1 225	-1 849	3 873

(a) Includes particulars relating to near country areas supplied by extensions of the Metropolitan distribution system.

**Water Consumption**

The following table gives details of water used during the year and storage capacity of major reservoirs at the end of the year for metropolitan and country districts for the years 1975-76 to 1978-79. The quantity of water pumped from the River Murray through the major pipelines is also shown.

**Water Storage and Consumption, South Australia**

Particulars	1975-76	1976-77	1977-78	1978-79
Capacity of major storages (at end of year):	Megalitres			
Adelaide metropolitan water supply(a) .....	188 680	188 680	188 680	209 440
Country water supply .....	34 860	34 860	34 860	34 860
Water consumption:				
Adelaide metropolitan water supply(b) .....	172 300	175 645	191 640	164 925
Country water supply(c) .....	82 800	84 192	86 946	80 322
Pumped from River Murray:				
Mannum-Adelaide Pipeline .....	39 000	78 602	91 179	50 568
Murray Bridge-Onkaparinga Pipeline .....	5 800	68 354	76 367	23 746
Morgan-Whyalla Pipeline .....	27 600	29 229	32 465	17 884
Other supply systems .....	13 800	24 220	29 123	14 533

(a) Includes storages on the Mannum-Adelaide and Murray Bridge-Onkaparinga Pipelines.

(b) Consumption within the Adelaide Statistical Division.

(c) Includes consumption in various areas outside of the Adelaide Statistical Division supplied from the Metropolitan distribution system.

**WATER RATES AND CHARGES**

Water rates are levied on all properties served from or abutting a water main except where specific exemption from rating applies or the property is in an area not subject to rating.

Amounts payable by individual ratepayers are determined by a base water rate on the annual value of a property and a water rate per kilolitre. Payment of the base rate on property permits use of a water allowance which is determined by dividing the sum involved by the water rate per kilolitre. Water used in excess of the allowance is charged at the rate per kilolitre.

Valuation equalisation was introduced in Metropolitan and Country Water Districts

from 1 July 1975. This system provides for a more even distribution of rates and properties of equal market value pay approximately the same base water rates irrespective of location or year of valuation. A minimum charge of \$36 is applicable.

In Country Lands Water District (farm lands) the current base water rate is 40 cents for each hectare located within 1·6 kilometres of a main. A minimum charge of \$36 is applicable.

The current water rate per kilolitre applicable in City, Township and Country Lands Water District is 24 cents per kilolitre. Where water is supplied to properties outside of proclaimed water districts or otherwise beyond ratable limits it is supplied by measure at the ruling rate per kilolitre.

Approved churches, charitable institutions and schools are exempted from payment of water rates on annual values and water is supplied to them by measure at concessional prices. A remission of up to 60 per cent of water rates, with a maximum of \$75 a year, is provided to eligible pensioners.

Services from mains to property boundaries are installed and maintained by the Engineering and Water Supply Department. Connection fees are uniform throughout the State and are currently \$100 for a 20 millimetre service and \$150 for a 25 millimetre service with commensurately higher fees for larger services.

## SEWERAGE

### ADMINISTRATION

Sewerage of cities and towns in South Australia is undertaken by the State Government under the authority of the Sewerage Act, 1929-1977. The Act is administered by the Engineering and Water Supply Department for the Minister of Water Resources and provides for water borne sanitary sewerage schemes within proclaimed drainage areas. As a general rule the Government sewerage schemes are provided only in densely populated cities and towns where they are essential for public health or in areas where it is necessary to protect surface or underground water resources from pollution by domestic or industrial wastes.

Local Government authorities are empowered under the Local Government Act, 1934-1979 to provide sanitary drainage schemes and in recent years a number of these authorities have installed common septic tank effluent drainage schemes discharging to biological filters or oxidation ponds.

### METROPOLITAN SEWERAGE

Sewerage for Adelaide was first authorised by an Act of Parliament in 1878. Construction began in 1879 and by 1881 sewerage from the city and inner suburbs was admitted to a sewage farm at Islington. Since then continual expansion of sewerage systems has kept pace with development of the metropolitan area as far as physical and financial factors permit and Adelaide is now the most completely sewered of the Australian capital cities.

The proclaimed Adelaide Drainage Area at 30 June 1979 served an estimated population of 906 000 persons and covered 674 square kilometres of the Adelaide Plains between Darlington and Smithfield, the area between Port Noarlunga and Aberfoyle Park and portion of the Blackwood and Belair area. Subdivision developers are required to make capital contributions towards the cost of sewer and water extensions for all new allotments in areas capable of being served within the Drainage Area.

Four major sewerage systems are employed, each draining to separate sewage treatment works at Bolivar, Glenelg, Port Adelaide and Christies Beach. Islington Sewage Farm was abandoned in 1966 when the Bolivar Treatment Works was put into service.

The Christies Beach Treatment Works began operating in August 1971, and will eventually serve the whole of the area between Coromandel Valley and Moana Beach. At present there are a number of small temporary treatment works installed in the Reynella-Morphett Vale area which will be phased out following connection of the developed areas to the Christies Beach Works.

A large number of common effluent drainage systems have been installed in fringe areas by local government authorities and most of these have been, or are planned to be, connected to the sewerage systems. A charge for each house connected is levied against local government authorities whose common effluent drainage systems discharge to sewer mains. Property owners pay an annual rate for the service to the local government authority concerned.

The following table shows details of metropolitan sewers for the last five years.

#### Metropolitan Sewers, South Australia

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
Adelaide Drainage Area (km <sup>2</sup> ) .....	652	662	666	674	674
Length of sewers (km) .....	4 368	4 538	4 718	4 887	5 056
Number of connections .....	298 472	309 781	320 456	324 366	330 224
\$'000					
<b>Revenue:</b>					
Rates .....	15 914	20 503	23 572	24 734	29 952
Other .....	223	81	148	590	465
Total .....	16 137	20 584	23 720	25 324	30 417
<b>Expenditure:</b>					
Working expenses .....	9 751	11 008	13 575	16 626	17 639
Interest .....	5 963	7 298	9 118	10 509	11 867
Total .....	15 714	18 306	22 693	27 135	29 506
Surplus .....	423	2 278	1 027	-1 811	911

#### COUNTRY SEWERAGE

At 30 June 1979 the drainage areas of country sewerage schemes constructed and operated by the Engineering and Water Supply Department totalled 135 square kilometres; the length of sewers laid was 799 kilometres and the number of connections totalled 35 317. Sewerage schemes are located at Angaston, Balhannah, Gawler, Gumeracha, Hahndorf, Lobethal, Mannum, Millicent, Mount Gambier, Murray Bridge, Myponga, Naracoorte, Oakbank, Port Augusta, Port Lincoln, Port Pirie, Stirling, Victor Harbor and Whyalla.

Construction of the Oakbank, Port Pirie, Port Augusta, Stirling and Victor Harbor sewerage systems is still in progress. In 1978-79, 26 kilometres of sewers and 1 693 new connections were laid in country drainage areas. In addition, the Engineering and Water Supply Department has constructed schemes at Mount Burr and Nangwarry townships for the Woods and Forests Department and numerous schemes to serve country hospitals, institutions etc., operated by other authorities.

Common effluent drainage schemes have been installed by local government authorities at Barmera, Berri, Birdwood, Bordertown, Burra, Clare, Cleve, Cobdogla, Crystal Brook, Cummins, Eudunda, Goolwa, Jamestown, Kadina, Kapunda, Kingscote, Lameroo, Lock, Loxton, Lyndoch, Maitland, McLaren Vale, Meningie, Mount Barker, Mount Pleasant, Mount Torrens, Nuriootpa, Parndana, Penola, Pinnaroo, Renmark,

Riverton, Saddleworth, Tanunda, Tintinara, Waikerie, Wallaroo, Williamstown, Wil-lunga, Woodside, and portion of Ardrossan, Port Augusta, Port Wakefield and Streaky Bay.

In addition to local authorities installing township schemes, the South Australian Housing Trust has provided Housing Trust home areas with small schemes. These have been installed at Quorn, Echunga and Kingscote. The small scheme at Kingscote has now been incorporated with the major scheme for the township.

The Australian National Railways has provided schemes for settlements in the areas of Stirling North, Hesso and Pimba while the Department of Aboriginal Affairs has provided schemes at Point McLeay, Point Pearce, Nepabunna, Ernabella, Amata and Davenport Aboriginal reserves.

Construction of systems is currently being carried out at Ceduna, Kimba and Tailem Bend. Extensions are being made to the Clare scheme.

#### SEWER RATES AND CHARGES

The Engineering and Water Supply Department provides sewer connections to property boundaries but internal drainage systems which are the responsibility of landholders must conform to regulations under the Sewerage Act and must be installed by authorised plumbers. Standard fees for sewer connections are \$50 and \$75 for 100-millimetre and 150-millimetre sizes respectively.

Sewer rates are levied on properties connected to or abutting a sewer, with a minimum annual charge of \$36. Valuation equalisation, as applicable to water rating, applies also to sewer rating. A marginally higher rate is charged in country areas. A remission of up to 60 per cent of sewer rates to a maximum of \$75 is provided to eligible pensioners.

Rates levied by local government authorities on properties connected to common effluent schemes are usually proportionate to the costs and interest charges involved in the schemes.

#### STATE WATER LABORATORIES

The Engineering and Water Supply Department has the responsibility to control pollution of the State's water resources, to maintain public water supplies at an acceptable quality and to operate sewerage systems. For this purpose, the Department maintains the State Water Laboratories at Bolivar, where a staff of chemists, biologists and other scientists and technical personnel examine over 55 000 samples of water, effluent and industrial wastes each year. A more detailed discussion on these laboratories was included on pages 369-71 of the *South Australian Year Book 1975*.

## 8.2 IRRIGATION AND DRAINAGE

#### IRRIGATION

The development of irrigation areas in South Australia has been carried out by both Government authorities and private interests. Since 1930 the administrative authority for Government irrigation areas has been the Department of Lands with the Engineering and Water Supply Department the constructing authority for the Minister of Irrigation, but from 30 June 1978, the authority has been transferred to the Minister of Water Resources with the Engineering and Water Supply Department being the responsible administrative department. A more detailed historical discussion of irrigation in South Australia was included on pages 314-6 of the *South Australian Year Book 1970*.

Irrigation areas are confined almost exclusively to the Murray Valley and can be classified into two groups; highland areas requiring the pumping of water, and reclaimed lands watered by gravitation. During 1978-79, 373 700 megalitres of water were diverted from the River Murray in South Australia for irrigation purposes.

### **Highland Areas**

With the major exception of the Myponga Irrigation Area, highland irrigation is located in the hot and dry zone along the River Murray between Morgan and the Victorian border.

These areas are largely devoted to vineyards and citrus and stone fruit orchards which are irrigated by water pumped from the river in open concrete-lined channels or pipes. Many of the recently developed areas use a system of overhead or under-tree sprays for watering the blocks in preference to the traditional surface reticulation. Sprays are also being used to develop land too high for reticulated watering. Landholders on Government controlled areas and on private lands constituted under special Parliamentary Acts pay an annual rate for routine irrigation and a charge is made for additional water, either on a measurement basis where meters have been installed, or on an hourly basis where channels are still utilised. The Renmark Irrigation Trust also supplies water on a volume basis to landholders in its district.

Irrigation systems must also provide for the removal of surplus water which accumulates beneath the surface of the land. Blocks have internal drainage systems either leading to shafts and bores or to comprehensive drainage systems which convey the water to evaporation basins.

### **Reclaimed Areas**

On the lower Murray between Mannum and Wellington, a series of swamp and overflow areas have been reclaimed by Government and private agencies.

Although these reclaimed areas contain some market gardens they are devoted principally to the growing of green fodder for dairy herds and sheep flocks. These lands are watered by gravitation and surplus water is run into main drains from which it is pumped back into the river. Approximately 600 hectares of highlands adjacent to reclaimed areas have also been developed for the production of fodder crops through the use of spray irrigation and there are 370 hectares at Myponga used for horticultural crops.

**Irrigation Areas, South Australia**

Area Irrigated	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	Hectares
<b>Government controlled:</b>							
War Service schemes (1939-45 War) .....	3 253	3 236	3 281	3 274	3 267	3 260	
Other .....	12 850	12 722	12 600	12 454	12 474	12 493	
<b>Non-government:</b>							
Trusts, boards and association areas .....	7 875	7 875	7 875	7 875	7 875	7 875	
Private schemes .....	18 875	18 875	18 875	18 875	18 875	18 875	

Further details of the 15 753 hectares irrigated in Government-controlled schemes in the year 1978-79 are shown in the next table.

**Government Controlled Irrigation Areas: South Australia, 1978-79**

Area Irrigated	Highland Areas		Reclaimed Areas	Total
	Surface Reticulation	Spray Irrigation		
Hectares				
War Service schemes (1939-45 War) .....	1 416	1 844	—	3 260
Other .....	7 130	1 800	3 563	12 493
Total .....	8 546	3 644	3 563	15 753

**THE RIVER MURRAY AGREEMENT**

The *River Murray Waters Act* 1915 ratified an agreement between the Commonwealth Government and the States of New South Wales, Victoria and South Australia. The River Murray Agreement provides that the minimum quantity of water to be allowed to be passed for supply to South Australia in each year shall be sufficient to maintain certain specified monthly flows in the lower river. The flow at Albury is shared equally by New South Wales and Victoria and each of these States has full control of its tributaries below Albury, subject in each case to the fulfilment of the South Australian allocation.

Works, to regulate the flow and control of the level of the River Murray, have included the construction of a number of storage areas and the erection of a series of locks and weirs. By 1928 Lake Victoria, in New South Wales adjacent to the South Australian border, had been converted into a large storage area supplying water for the South Australian irrigation settlements. South Australia is responsible also for the control and operation of Lake Victoria storage and the section of the River Murray downstream of its inlet channel. This section of the river contains three locks. Between 1922 and 1930 six locks and weirs were erected between Blanchetown and the Victorian border. In addition, five barrages were placed at the Murray mouth to prevent the ingress of salt water from the sea and to maintain a higher level in the River for the use of the reclaimed areas. These barrages were completed in 1940.

The major storage area, the Hume Reservoir above Albury, was completed in 1936. Further works, the last being completed in 1961, have doubled the original capacity to more than 3 million megalitres. Except for that held in various lock pools, no water from the Murray is stored in South Australia. In 1962 agreement was reached for the construction of a reservoir of over 6 million megalitres covering 1 300 square kilometres with its dam at Chowilla, just inside the State border, but early in 1969 the River Murray Commission recommended that an alternative dam be built at Dartmouth in Victoria before further consideration be given to the completion of the Chowilla Dam. Legislation ratifying an agreement based on the Commission's recommendation was passed by the Commonwealth, New South Wales and Victorian Parliaments in 1970 and an Act ratifying the agreement was passed in the South Australian Parliament in August 1971. In June 1974 the River Murray Commission accepted a tender for the construction of the Dartmouth Dam and appurtenant works. The bulk of the 14 million cubic metres of earth and rockfill material comprising the main embankment have now been placed. The river diversion tunnel was plugged on 3 November 1977 and filling commenced at that time. The Dam was subsequently completed on 9 November 1979. South Australia's annual entitlement was increased from 1 550 to 1 850 gigalitres in accordance with the River Murray Waters Agreement.

### DRAINAGE

With the exception of the reclaimed areas along the lower Murray, already discussed in the previous section, and certain works associated with metropolitan development, drainage schemes in South Australia are confined to the south-east corner of the State. The topography of this area reveals a series of fertile valleys or flats interspersed by low infertile ranges running parallel to the sea and thus preventing the natural drainage of the land. In consequence, drainage schemes have been constructed to reclaim these areas.

The first major drainage scheme was commenced in 1863 and completed in 1885. This scheme, the Millicent Drainage System, reclaimed 40 000 hectares of land at a cost of \$300 000, this cost subsequently being included in the land allotment price. The system is maintained by the Millicent District Council from rates levied on land holders.

Following this early success the Government undertook the construction of further drains during the next sixty years. These drains were constructed under three sets of conditions: *National Drains* were constructed at Government expense, the cost being absorbed in the price of the land when sold; *Petition Drains* were constructed on request from landholders who agreed to repay the full cost to the Government over a period of forty-two years; *Scheme Act Drains* commenced in 1908, provided for the Government and the landholders to share the cost, the landholders share being repayable over forty-two years. After the Scheme Act Drains had been completed it was found that the cost exceeded the benefit derived, and subsequently, following a royal commission, the landholders' liability was reduced.

The passing of the South-Eastern Drainage Act Amendment Act, 1948 marked a new stage in the development of south-eastern drainage. Previously attention had been devoted to the construction of a system of drains removing large quantities of water from general areas and providing above all for the rapid removal of floodwaters. By 1948, 700 kilometres of drains had been constructed at a capital cost of \$1 441 752. However, in 1948, with the establishment of the Western Division Drainage Scheme, emphasis was placed on a complete drainage program as achieved by the earlier Millicent scheme. The Western Division Drainage Scheme, which aimed at the comprehensive drainage of 160 000 hectares of land between the Millicent and Kingston districts, has now been completed. In 1960 the Eastern Division Drainage Scheme, for the drainage of 300 000 hectares of flats lying between Kalangadoo and 65 kilometres north of Lucindale, was commenced and construction on this scheme was completed in November 1969.

Under the schemes introduced since 1948 landholders were required to repay an amount based on a 'betterment assessment' of their property. As in the other schemes this amount was repayable over forty-two years. The 1971 amendment to the South-Eastern Drainage Act extinguished the liability of landholders to make a capital contribution in respect to existing drainage construction.

At 30 June 1979 approximately 1 450 kilometres of drains (excluding the Millicent scheme) had been constructed at a capital cost of \$19 044 000. These drains vary considerably in size from only a few metres to over 60 metres bottom width.

The Board now also maintains the Eight Mile Creek Drainage Scheme which is located 35 kilometres south of Mount Gambier near Port MacDonnell. Fifty kilometres of drains remove excess spring and rain water from 16 660 hectares of peat land on which 32 dairy properties are situated.

In addition to new construction, continual attention must be paid to the prevention of silting and of weed growth and to the upkeep of over 700 bridges. Rates are levied on landholders to meet the costs of such maintenance.

The system is administered by the South-Eastern Drainage Board under the South-Eastern Drainage Act, 1931-1977.

## 8.3 ROADS

Roads in South Australia are officially classified either as main roads, being those proclaimed as such under the provisions of the Highways Act, or district roads. Main and district roads within local government areas are vested in the various local government authorities who primarily are responsible for construction and maintenance works within their respective areas. However, there is provision in the Highways Act for the Commissioner of Highways to construct, reconstruct, and maintain important roads after due notice has been given, and in practice most of the roads carrying heavy traffic are constructed and maintained by the Highways Department. In areas outside the control of local government authorities roads are vested in the Minister of Local Government under the control and management of the Commissioner of Highways.

The National Association of Australian State Road Authorities (NAASRA) has defined a nine-level classification system which is used jointly by the Highways Department and the Bureau of Transport Economics for planning purposes. The Commonwealth Department of Transport has adopted a six-level system of road classification, based generally on the NAASRA system, for funding purposes.

The latter classification is used in the following table to show the length of roads, customarily used by the public, according to type of surface at 30 June 1979.

**Length of Roads: Type of Surface, South Australia  
At 30 June 1979**

Class of Road	Type of Surface				Total	
	Natural Surface	Formed Only	Paved			
			Unsealed	Sealed		
Kilometres						
National roads (a):						
National highways (b) .....	571	372	6	1 667	2 616	
Arterial roads (c):						
Rural .....	—	501	1 651	7 710	9 862	
Urban .....	—	8	40	1 049	1 097	
Local roads (d):						
Rural .....	35 988	22 748	19 024	3 268	81 028	
Urban .....	465	584	372	4 456	5 877	
Total .....	37 024	24 213	21 093	18 150	100 480	

(a) Roads declared by the Commonwealth Minister for Transport to be national highways or commercial roads under the provisions of the *States Grants (Roads) Act 1977*.

(b) Roads linking State capital cities with other State capital cities, Canberra, Darwin, other specified cities and other roads considered to be of national importance.

(c) Roads declared by the Commonwealth Minister for Transport to be arterial roads under the provisions of the *States Grants (Roads) Act 1977*.

(d) Roads not included in above categories.

The natural surface roads shown in the table include tracks in localities outside of local government areas.

In closely settled areas, particularly in the metropolitan area and country towns, most roads are surfaced with bituminous concrete or by bituminous penetration of a macadam base. In rural districts where traffic is light, roads may be formed of natural materials or be only lightly gravelled but the more important country roads are constructed of gravel or crushed rock and are improved as traffic warrants, by the addition of a bituminous seal.

A continuous program of road improvement is carried out by reconstructing and widening arterial roads in the metropolitan area and the construction and sealing of important rural roads. Extensive road construction is carried out also in new housing development areas.

Ferry services across the River Murray are provided on a free and continuous basis and are under the control and management of the Commissioner of Highways. The Commissioner also operates a free ferry across Cooper Creek, on the Birdsville Track in the far north of the State, when the Creek is in flood.

### ROAD FINANCE

Funds used for roadworks in South Australia in 1978-79 were derived from four main sources, namely:

- (1) the net proceeds of fees imposed by the State Government for the registration of motor vehicles and the licensing of drivers;
- (2) grants from the Commonwealth Government;
- (3) charges imposed by the State Government under the Road Maintenance (Contribution) Act;
- (4) property rates and other levies imposed by municipal and district councils.

Funds received from the first three sources were expended by the Commissioner of Highways on works authorised by the Minister of Transport. The Highways Act provides for fees received for vehicle registrations and drivers licences, less cost of collection, to be credited to the Highways Fund. The Fund is credited also with interest on and repayments of advances made to local government authorities for roadworks and for the purchase of machinery; special contributions from the State Transport Authority under the Highways Act; contributions from local government authorities towards the cost of lighting roads; licence fees collected under the Hawkers Act, 1934-1960; and other minor sundry receipts. Receipts under the Road Maintenance (Contribution) Act are paid into a special account at the State Treasury and applied only to the maintenance of public roads.

Exact figures are not available for total expenditure in South Australia on the construction, reconstruction, and maintenance of roads, streets, bridges, ferries, and associated works. Approximate expenditure by State and local government authorities during each of the past five years was; 1974-75, \$77 million; 1975-76, \$90 million; 1976-77, \$105 million; 1977-78, \$114 million and 1978-79, \$126 million. These figures include the cost of land purchased for new roads, for road widening and charges for depreciation of plant and machinery. Local government figures used to derive the totals include expenditure which is subsequently recouped from the public and expenditure on footpath maintenance and stormwater drainage.

**Highways Department: South Australia, Receipts and Payments**

Particulars	1975-76	1976-77	1977-78	1978-79
RECEIPTS (\$'000)				
Motor vehicle registrations, licences, fees, fines, etc. ....	27 574	40 081	39 848	42 352
Road maintenance charges .....	4 243	4 716	4 825	4 812
Commonwealth Government grants .....	41 100	39 359	40 749	43 442
Repayments of, and interest on, advances to local authorities .....	326	198	141	164
Other .....	2 901	484	881	1 526
Total .....	76 144	84 838	86 444	92 296

**Highways Department: South Australia, Receipts and Payments (continued)**

Particulars	1975-76	1976-77	1977-78	1978-79
PAYMENTS (\$'000)				
Construction and reconstruction of roads, bridges, etc. ....	44 095	53 008	47 607	54 385
Maintenance of roads, bridges, etc. ....	18 479	19 998	21 750	24 430
Interest, debt redemption, etc. ....	707	770	806	808
Advances to local authorities ....	31	26	59	51
Net purchases of land, buildings, plant, equipment, materials, etc. ....	1 446	2 988	3 805	2 088
Other (a) ....	9 243	8 826	11 333	12 816
Total ....	74 001	85 616	85 360	94 578

(a) This includes provision for leave and plant overhauls which may be a negative figure in some years.

The biggest single element of roads expenditure omitted from the above table is the cost of work carried out under the provisions of the Planning and Development Act, 1966-1978, which requires persons and authorities (including the South Australian Housing Trust) who subdivide land for housing to provide roads to certain specifications.

**Commonwealth Government Road Grants**

Road grants by the Commonwealth Government have been made to the States since 1923-24. The current road grant arrangements are contained in the *States Grants (Roads) Act 1977*. Under this legislation a total of \$508 million was allocated to the States for the financial year 1978-79. The allocation to South Australia was \$43.2 million or 8.5 per cent of the total States allocation.

In arriving at the current road grant arrangements the Commonwealth Government took into account the Commonwealth Bureau of Roads *Report on Roads in Australia 1975*. In this report, the Bureau set out its assessment of the most appropriate road expenditure programs in each State for the years 1977-78 to 1980-81, and made recommendations regarding the Commonwealth Government road grants and arrangements considered necessary to achieve these expenditure programs.

Although the Commonwealth Government was guided to a considerable extent by the Bureau report, the roads grant program adopted differed significantly from that recommended by the Bureau.

Under the *States Grants (Roads) Act 1977* the Commonwealth Government allocated grants to national roads and to roads other than national roads. The total 1978-79 allocation for national roads to all States was \$204.8 million. The allocation to South Australia was \$18.9 million or 9.2 per cent of the total States allocation. The grants for national roads are provided to meet the approved construction and maintenance costs of declared national highways, including in South Australia the principal road links connecting Adelaide to Melbourne, Adelaide to Perth and Adelaide to Darwin. In addition, national road grants are provided to meet the approved construction costs of declared national commerce roads. National commerce roads are roads which facilitate or aid the development of trade or commerce with other countries or among the States.

For roads other than national roads the total 1978-79 Commonwealth Government grant allocation to all States was \$303.2 million. The allocation to South Australia was \$24.3 million or 8.0 per cent of the total States allocation. These grants are provided for approved expenditures on rural arterial roads, rural local roads, minor traffic engineering and road safety improvements with respect to roads, urban arterial roads and urban local roads.

**Commonwealth Government Road Grants: South Australia, 1978-79**

	\$'000
National roads:	
National highways construction .....	16 133
National highways maintenance .....	2 032
National commerce construction .....	700
Total national roads .....	<u>18 865</u>
Roads other than national roads:	
Rural arterial construction .....	8 086
Rural local construction and maintenance .....	7 165
Meters (a) .....	1 818
Urban arterial construction .....	4 920
Urban local construction .....	2 353
Total other roads .....	<u>24 342</u>
<b>Total roads .....</b>	<b><u>43 207</u></b>

(a) Minor traffic engineering and road safety improvements.

Under the *States Grants (Roads) Act 1977*, the Commonwealth Government has stipulated that, as a condition to the receipt of road grants, each State should meet from its own resources minimum annual road expenditure quotas. The 1978-79 quota stipulated for South Australia was \$39.8 million.

In addition to grants for the construction and maintenance of roads, the Commonwealth Government provides grants to the States for planning and research projects associated with transport by land of persons or freight, or persons and freight. These grants are made under the *Transport Planning and Research (Financial Assistance) Act 1977*. The total 1978-79 grant allocation to all States was \$6.4 million. The allocation to South Australia was \$469 000 or 7.3 per cent of the total States allocation. For 1978-79 these grants were provided to meet two-thirds of the approved cost of all approved planning and research projects undertaken by the States in relation to transport by land.

### ROADS SURVEY

A survey designated as the Australian Road Survey Update 1977, a joint undertaking by the National Association of Australian State Road Authorities and the Bureau of Transport Economics, has been completed and a report of the results has been prepared for the Commonwealth Government to use as a basis of road finance legislation for the three years 1980-81 to 1982-83.

### FUTURE DEVELOPMENT

The *South Australian Year Book 1970*, on pages 319-25, contained some details of the reports of two major studies: these were the reports of the Town Planning Committee of South Australia (Metropolitan Development Plan), submitted in 1962, and the Metropolitan Adelaide Transportation Study (MATS) report, released in 1968. In June 1970 the Government undertook to review the MATS proposals with particular reference to public transport. The resultant Adelaide Transportation Report 1970 or 'Breuning Report' was discussed in the *South Australian Year Book 1971*, on pages 317-8.

One outcome of the Breuning Report was the appointment of a Director-General of Transport to advise the Minister on transport policy. In 1973 the Director-General submitted a report to the Minister, entitled *Public Transport in Metropolitan Adelaide*. The report contained a program of improvements to urban public transport ranging from specific projects to be executed in the near future to a broad program for up to thirty years in the future. This report has become the basis for current Government policy. A revised document to update this report was commenced in 1975.

Some extensive and important roadworks have proceeded, and will continue, along lines recommended in the earlier reports. These include major arterial road and street improvements and the progressive improvement of interstate road links. Major improvements to the main Adelaide to Melbourne route have been under way for some years and will continue.

An investigation of alternative routes for the National Highway linking Adelaide and Darwin between Port Augusta and the Northern Territory border has been completed. Construction work is in progress and sealing of the section between Port Augusta and Woomera will be completed in 1980.

### RESEARCH

Because of the great area of South Australia and the wide variety of climatic and soil conditions, special sections of the Highways Department are engaged in constant investigation and testing of soils, materials, and construction methods to ensure that a high standard of road construction is maintained and that methods are adapted to the needs of particular areas.

South Australia contributes to Australian road development through its active participation in the National Association of Australian State Road Authorities. Specialist committees deal with bridge design, materials research, traffic engineering, bituminous pavements, plant and equipment, and long-term planning. The Association in 1960 established the Australian Road Research Board as a national centre for road research information and for the correlation and co-ordination of road research activities.

## 8.4 RAILWAYS

Railway systems in South Australia are operated by both the Commonwealth and South Australian Governments. Management of the Australian National Railways is vested in the Australian National Railways Commission.

In 1851 a 'Board of Undertakers' was appointed in connection with the construction of the Adelaide to Port Adelaide railway and in 1856 a Board of Railways Commissioners was appointed to control South Australian railway operations. This Board was abolished in 1859 and from then until 1887 control was vested in the Commissioner of Public Works. The South Australian Railways Commissioners Act of 1887 gave almost complete authority for management and administration to three Railways Commissioners, reserving (as in the past) financial control to Parliament. The powers of the three Commissioners passed to one Commissioner in 1892. The South Australian Railways Commissioners Act, 1936-1975, under which the Commissioner was appointed for a period of seven years, incorporated many of the provisions of the 1887 Act, including those for financial control.

In August 1975 the State Government approved the transfer of non-urban railways to the Australian National Railways Commission, although the actual transfer did not become operative until 1 March 1978. For further details of the operation of railways in South Australia during the transfer period and after the transfer date see pages 484-5.

In South Australia the only private railways open to general traffic are the lines owned by the Broken Hill Proprietary Co. Ltd from Iron Knob and Iron Baron to Whyalla (82 kilometres) used for the carriage of iron ore; and from Coffin Bay to Port Lincoln (40 kilometres) used for the carriage of limesand.

Only a small portion of the Adelaide metropolitan area is served by railways, the main trunk routes passing through northern and southern suburbs. The line to Noarlunga Centre serves south-western suburbs and carries passenger traffic and goods traffic to Port Stanvac and Lonsdale. This line serves the rapidly expanding industrial and housing development along the coast south of Adelaide. The Port Adelaide line, its extensions to Outer Harbor, the branch line to Grange, and spur lines to industrial establishments provide better coverage in north-western suburbs than is achieved elsewhere in Adelaide.

A more detailed historical survey on railways in South Australia was included on pages 263-6 of the *South Australian Year Book* 1966.

#### **Standardisation of Rail Gauges**

Narrow, standard, and broad gauge systems exist in South Australia. For many years railway administrators have been greatly concerned about the increased costs and decreased efficiency associated with the transhipment of goods and passengers and with the provision, maintenance and operation of different sets of rollingstock. During recent years with the rapid development of road and air transport facilities there has been increasing pressure for standardisation of rail gauges in the interests of efficiency and economy of operation of transport services as a whole.

Details of lines that were standardised before the transfer of the non-metropolitan railways are shown on pages 347-8 of the *South Australian Year Book* 1978.

Following the enactment of the legislation for the transfer of the non-urban railways to the Australian National Railways Commission, the Federal Minister of Transport appointed a Committee to report on the Adelaide to Crystal Brook Rail Standardisation Project and a report was released in February 1977. Since then discussions between the various government authorities have taken place and an alternative proposal put forward.

#### **Tarcoola-Alice Springs Railway**

Construction of the 831 kilometre standard gauge all weather line linking Alice Springs to Tarcoola commenced in 1975 and has involved one of the largest railway projects undertaken in Australia in modern times. The project is within the budget of \$145 million and is due for completion in late 1980. The line will provide a passenger service linking Adelaide and Alice Springs within twenty-two hours instead of nearly three days on the old line through Marree; reduction of time for freight train schedules will also be achieved.

## **8.5 HARBOURS AND AERODROMES**

### **HARBOURS**

The State of South Australia, including Kangaroo Island, has a coastline of more than 3 850 kilometres. There are two large indentations, Gulf St Vincent and Spencer Gulf, which have many harbours for shipping.

Of the many seaports in South Australia, at present only sixteen are used by commercial shipping: nine of these have State-owned wharves or jetties and seven have privately-owned wharves or jetties. In addition the State maintains jetties or wharves for promenade and fishing purposes at fifty ports that are no longer used by commercial shipping and eighteen jetties are leased to district councils.

The Broken Hill Proprietary Co. Ltd owns and operates bulk handling facilities at Ardrossan, Rapid Bay, Whyalla and Proper Bay, while the Colonial Sugar Refining Co. Ltd owns and operates a bulk loading installation at Ballast Head, Kangaroo Island. The Australian National Railways operates the wharf at Port Augusta on behalf of the Commonwealth and the Port Stanvac oil terminal is owned by Petroleum Refineries (Aust.) Pty Ltd.

There are six deep-sea ports operated by the State, namely Port Adelaide, Port Pirie, Port Lincoln, Thevenard, Wallaroo and Port Giles while overseas vessels are also accommodated at Port Stanvac, Port Augusta, Whyalla and Ardrossan.

### CONTROL OF HARBOURS

The control of State-owned harbours (including the River Murray) is vested in the Minister of Marine; he is responsible for the control of navigation within harbours and for all harbour facilities including lights, buoys, beacons, bulk loading plants and fishing boat accommodation. In addition he is responsible for the control of the competency of masters and others in charge of intrastate vessels and fishing vessels, and the seaworthiness and safety of such vessels. Relevant legislation includes the Harbors Act, 1936-1978, the Marine Act, 1936-1976 and the Fisheries Act, 1971-1977.

#### Department of Marine and Harbors Indebtedness, Revenue and Expenditure

Year	Loan Fund Indebted- ness	Revenue	Expenditure from Revenue			Surplus (+) or Deficit (-)
			Working Expenses	Interest	Total	
\$'000						
1974-75 .....	73 013	10 889	8 425	3 828	12 253	-1 365
1975-76 .....	80 388	10 705	9 065	4 661	13 726	-3 021
1976-77 .....	87 343	12 751	11 142	5 839	16 981	-4 230
1977-78 .....	93 316	13 955	12 643	6 576	19 219	-5 264
1978-79 .....	96 278	17 448	13 463	7 238	20 701	-3 252

In 1978-79 the Department of Marine and Harbors handled 7 868 855 tonnes of cargo (including general cargo at private ports) or approximately 49 per cent of the total tonnage of 16 138 141 tonnes passing through all the ports in South Australia; the balance, consisting mainly of bulk mineral shipments, being handled independently at the privately owned wharves.

### HISTORICAL

For a detailed description of development in the nineteenth century see pages 270-1 of the *South Australian Year Book 1966*.

### Trend of Development

As shipping has increased through growth in trade many wharves and jetties have been strengthened or replaced by better structures. To keep most harbours open for larger vessels it has been necessary to deepen and widen navigation channels, deepen existing berths and extend jetties into deeper water. An example of this type of project was the redevelopment of Thevenard harbour, completed in 1972, which entailed the dredging of a deeper channel and the reconstruction of the jetty so that bulk carriers twice the size of those previously accommodated could be fully loaded.

Since the establishment of new soldier settlements in the 1950s, shipping to and from Kangaroo Island has increased. Additional harbour facilities were made available with the provision of a trailership berth at Kingscote for the roll-on roll-off vessel M. V. *Troubridge* which went into service in November 1961. Trailership berths were also built at Port Adelaide and Port Lincoln.

A change in the pattern of intrastate shipping has occurred progressively since 1952 with the provision of bulk handling facilities for grain at major ports. These facilities are now available at Port Adelaide, Port Pirie, Wallaroo, Port Lincoln, Thevenard and Port Giles, and also at Ardrossan under agreement with the owner of the private wharf. Grain is railed or trucked overland to terminal silos and loaded aboard ocean-going vessels by means of conveyors, so eliminating ketch trade from the smaller ports. Competition from intrastate road and rail transport has affected the larger ports as well, so that very little general cargo is carried between ports in this State.

Future developments at ports other than Adelaide are likely to be concerned primarily with bulk trades and the increasing size of bulk carriers. For example, bulk handling facilities, involving extension of an existing jetty to provide two outer berths for loading grain ships and an inner berth for unloading phosphate-rock carriers, have been completed at Port Lincoln. The phosphate-rock berth is in operation and caters for ships up to 35 000 tonnes. The first conveyor loader system was commissioned in May 1977 and the first ship loaded grain on 26 May 1977. A second ship loader, commissioned in February 1978, doubled the input capacity to 4 000 tonnes an hour. The two grain berths cater for ships up to 60 000 tonnes but could be modified for ships of 100 000 tonnes. The overall cost of the whole project (including dredging) was almost \$13 million.

### Development of Port Adelaide

The Greater Port Adelaide Plan, details of which were released in 1949, included proposals for twenty projects for port development over the ensuing fifty years. Among those projects were:

- (1) the improvement and extension of wharves and allied cargo facilities;
- (2) the deepening, and widening of the shipping channels and provision of larger swinging basins;
- (3) the reclamation and development of low-lying land adjacent to the port for the creation of industrial, commercial and dock estates.

Some of these projects have been completed while others are still in progress, e.g. the Port River has been deepened to 9 metres at Low Water and a swinging basin of 305 metres diameter has been provided in the inner harbour. Currently the river channel is being widened to a minimum width of 150 metres. The material dredged in this operation is being used to reclaim part of the 800 hectares of low-lying land intended to be used for industrial and commercial sites and for port extensions.

To ensure the future of Port Adelaide as a major port, a container berth, capable of accommodating the largest cellular container ships likely to serve Australia in the

foreseeable future, has been established at Outer Harbour. The berth, channel and swinging basin are suitable for ships of 290 metres in length, 11 metres in working draft and a capacity of almost 3 000 containers. The approach channel has been deepened to a depth of 12.3 metres so that ships would not be delayed by tide movements. The berth was officially opened on 17 March 1977 and 30 vessels used the facilities during 1978-79.

Two container depots have been built by private enterprise in the dock industrial estate 800 metres from the inner harbour waterfront and offer acceptance, forwarding, packing and unpacking facilities for international and interstate containers and other unit loads: to facilitate shipment of wool in containers a large wool store and a high density wool dumping centre have been established adjacent to these depots.

An interstate roll-on roll-off terminal in No. 3 Dock was opened early in 1971 and later in the year the facilities were extended to serve larger roll-on roll-off vessels engaged in overseas trade. A berth in No. 1 Dock has been modified to provide a reinforced concrete pad for the stern-loading type of vessel operating between Port Adelaide and ports in Tasmania. Recent developments include the provision of a steel handling berth to accommodate roll-on roll-off vessels and modifications to an outer harbour berth to serve larger overseas roll-on roll-off vessels.

### AERODROMES

There were twenty-nine civil aerodromes in South Australia at 30 June 1979 including nine owned and operated by the Commonwealth Government and twenty licensed aerodromes owned and operated by local authorities or private interests. In addition there are numerous authorised landing grounds which are fields prepared for the operation of aircraft but not open to public use. These fields meet Commonwealth Government specifications less exacting than those used in the development of government owned or licensed aerodromes.

Government and licensed aerodromes in South Australia are set out below.

<i>Government Owned</i>		
Adelaide	Leigh Creek	Parafield
Ceduna	Mount Gambier	Port Lincoln
Kingscote	Oodnadatta	Whyalla
<i>Licensed</i>		
Amata	Granite Downs	Mount Dare
Cleve	Indulkana	Naracoorte
Cordillo Downs	Innamincka	Port Pirie
Cowell	Kimba	Renmark
De Rose Hill	Loxton	Tieyon
Ernabella	Millicent	Waikerie
Fregon	Minnipa	

The main terminal in South Australia is the Adelaide Airport at West Beach, and although not an international airport it can be used by international aircraft when required. It is on the scheduled flights of interstate services from Sydney, Melbourne, Perth, Canberra and Darwin and is the terminus of intrastate services.

Since the opening of the Adelaide Airport the aerodrome at Parafield, about 18 kilometres north of Adelaide, has been restricted principally to use by light aircraft.

Other aerodromes are situated near the larger towns e.g. Mount Gambier, Whyalla,

Port Lincoln and Port Pirie. About half of the licensed aerodromes are on stations, missions, etc. in the northern part of the State.

In addition to the civil aerodromes there are two major aerodromes, one at Woomera controlled by the Department of Defence, through the Defence Research Centre, and the other at Salisbury (Edinburgh Airfield) which are used by aircraft associated with trials operations and by civil charter aircraft carrying passengers and freight. Edinburgh Airfield is also the base for a Royal Australian Air Force maritime squadron.

A joint Government Advisory Committee consisting of representatives from Commonwealth Government departments, South Australian Government departments and local government authorities recently considered future airport requirements for the Adelaide region.

### Control of Aerodromes

At a conference of Commonwealth Ministers and State Premiers in May 1920, it was agreed that the Commonwealth should introduce a Bill to give effect to the Convention for the Regulation of Air Navigation signed in Paris on 13 October 1919. The *Air Navigation Act* 1920, under which a Controller of Civil Aviation was appointed as head of the Civil Aviation Branch which came under the jurisdiction of the Department of Defence, had three main objectives:

- (1) generally to regulate civil aviation activities in Australia;
- (2) to carry out the provisions of the Convention on Air Navigation signed in Paris;
- (3) to apply the principles of the Convention to domestic as well as international flying operations.

Regulations were drawn up under this Act to provide, *inter alia*, for the registration and periodic inspection of aircraft, licensing of aerodromes, examination and licensing of personnel engaged in flying and in upkeep of machines, control of aircraft movements, and the application of rules of the air.

The South Australian Parliament passed the Commonwealth Powers (Air Navigation) Act, 1921 in which it referred to the Commonwealth powers to make regulations in connection with international and interstate air navigation. The Air Navigation Act, 1937 provided for the application of the Commonwealth Air Navigation Regulations to and in relation to air navigation within the State of South Australia and repealed the earlier Act.

The Commonwealth civil aviation legislation at present includes the *Air Navigation Act* 1920, the *Australian National Airlines Act* 1945 and several other Acts, while the State legislation in South Australia includes the 1937 Act and the Civil Aviation (Carriers' Liability) Act, 1962-1971.

Civil aviation administration was a separate department under the Minister for Civil Aviation from 1939 until 1 December 1973 when it was incorporated in the Department of Transport.

### Historical

A description of early aerodromes in South Australia and development was included on pages 277-8 of the *South Australian Year Book* 1966: an article describing the first flight from England to Australia, in 1919, appeared on pages 334-5 of the *South Australian Year Book* 1969.

## 8.6 ELECTRICITY AND GAS

### ELECTRICITY

In 1946 the Electricity Trust of South Australia (ETSA), a public corporation, acquired the assets of the Adelaide Electric Supply Company and since then the Trust has been responsible for electricity supply throughout most of the State. Over the years indigenous fuels—coal from Leigh Creek and natural gas from the north-east of the State—have largely supplanted imported fuels. A detailed description of the development of electricity supply was included on pages 278-81 of the *South Australian Year Book* 1966.

#### Power Generation

The Osborne 'A' station produced all of the requirements of the South Australian electricity network from 1923 until 1947 when the 'B' station commenced operations and the 'A' station was subsequently closed in 1968. At 30 June 1979 the remaining generating capacity at Osborne (excluding emergency generating plants) was 240 megawatts.

A major decision by the Trust was the construction of the Thomas Playford Power Station at Port Augusta, designed to burn Leigh Creek coal exclusively. The 'A' section was completed in 1954 while the 'B' section was completed in 1964 to give a combined total generating capacity of 330 megawatts.

Following the passing of the Electricity Trust of South Australia (Torrens Island Power Station) Act in 1962 work commenced on the construction of section 'A' of the Torrens Island Power Station. Section 'A' was completed in the first half of 1971 and comprises four 120 megawatt turbo-generators with associated boiler equipment. Stage 1 of Section 'B' comprising two 200 megawatt turbo-generators has been completed with the second unit coming into service in October 1976. Stage 2 of Section 'B' also has two 200 megawatt turbo-generators. The first has been operational since the end of 1979. Work on the second machine of Stage 2 is proceeding in the contractor's workshops and it should be operational early in 1981. All major civil construction work has now been completed. Section 'B' will have four 200 megawatt units and this will make the combined capacity of 'A' and 'B' sections of Torrens Island Power Station 1 280 megawatts.

At the Dry Creek Power Station, three gas turbine generators each with a capacity of 52 megawatts have been installed to meet high load demands of short duration. Three 25 megawatt gas turbine generators have been erected at Snuggery in the South East. These generators are fuelled by distillate and the plant is normally operated by remote control from System Control Centre, Adelaide.

**Electricity Generation, South Australia  
Installed Capacity of Generating Plant in Power Stations at 30 June**

Power Stations	1967	1970	1973	1976	1979
Electricity Trust:			Megawatts		
Osborne .....	312	240	240	240	240
Port Augusta .....	330	330	330	330	330
Torrens Island .....	120	360	480	480	880
Dry Creek .....	—	—	—	156	156
Mount Gambier .....	22	22	22	22	—
Port Lincoln .....	9	9	9	9	9
Snuggery .....	—	—	—	—	75
Total ETSA .....	793	961	1 081	1 237	1 690

To meet future demands, a power station is being built close to the existing station at Port Augusta. Levelling of the site has been completed, a new access road constructed and sub-foundation work commenced. Orders have been placed for two 250 megawatt turbo-generators and two matching boilers; the first unit is planned for operational service in 1984. The boilers, specially designed to burn Leigh Creek coal, will be fitted with electrostatic precipitators to reduce dust emission.

### Fuels

The development of the Leigh Creek coal field and the use of this coal as a source of power freed the Trust from its relative dependence upon New South Wales coal as a fuel source. Since commissioning, the Thomas Playford Power Station at Port Augusta has used this type of fuel exclusively.

Natural gas discoveries in the north-eastern areas of South Australia and the construction of a natural gas pipeline to Adelaide has given the Trust a further source of indigenous fuel. The six boilers at Torrens Island have been equipped to use natural gas or oil, or both fuels simultaneously. The Trust commenced using natural gas in 1969 and it uses more of this type of fuel for generation than any other electricity authority in Australia.

Because of the continuing reduction in wood waste supplies, the Trust ceased operating the Mount Gambier Power Station in October 1976 and arrangements were made for some of the plant to be taken over by the Woods and Forests Department to generate electricity for internal use.

### Electricity Trust of South Australia, Fuels Consumed in Power Stations

Year	NSW Coal	Leigh Creek Coal	Oil	Wood (a)	Distillate	Natural Gas	Tonnes	Millions of MJ
1966-67 .....	51 045	2 123 459	232 674	187 687	—	—	—	—
1969-70 .....	3 430	2 155 239	299 180	185 629	—	—	5 673	—
1972-73 .....	—	1 588 735	37 893	198 496	—	—	29 040	—
1975-76 .....	—	1 869 073	84 183	125 375	—	—	36 663	—
1977-78 .....	—	1 758 048	68 585	—	—	—	50 498	—
1978-79 .....	—	1 603 257	70 314	—	2 008	—	52 858	—

(a) Mill waste.

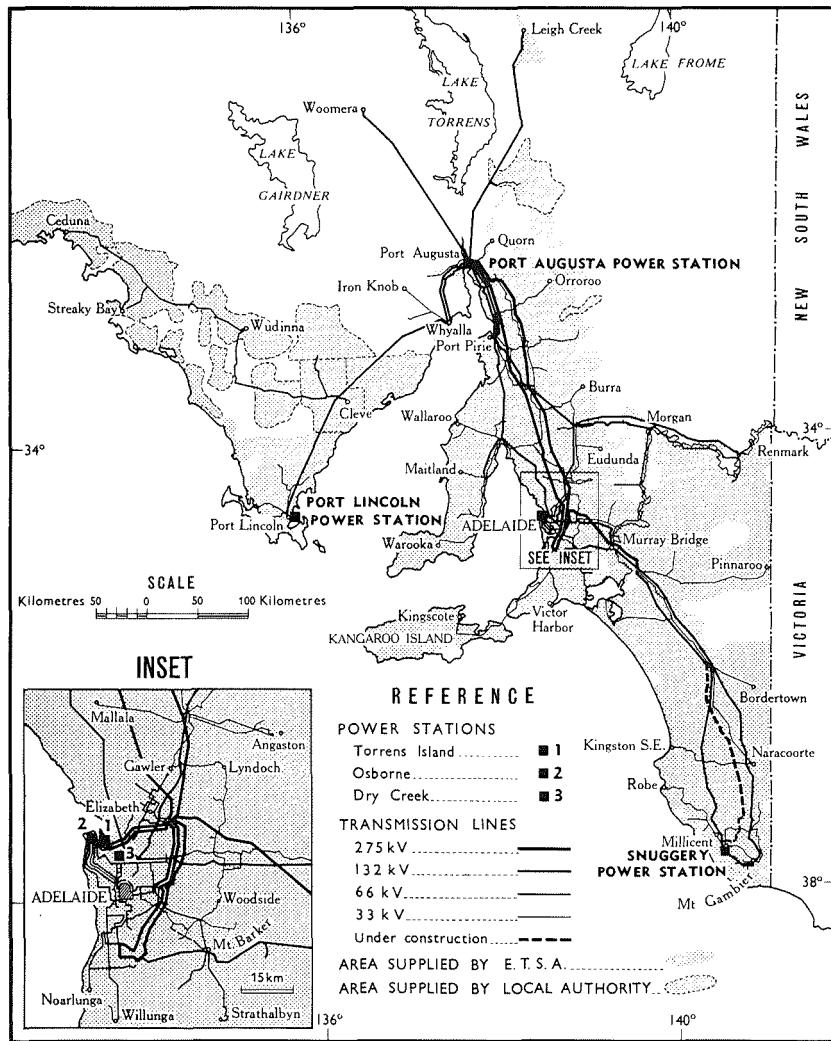
### Transmission and Distribution

The Electricity Trust expanded its area of supply in the post-war years and this expansion required an extensive construction program of transmission and distribution lines. In the first ten years of the Trust's operations the length of transmission and distribution lines rose from 4 400 kilometres in 1946 to 12 800 kilometres in 1956. Expansion over the next ten years was equally as active primarily because of the construction of 13 600 kilometres of the single wire earth return system. This system allows supply in country areas where consumers are so scattered that supply by conventional methods would be impracticable. Most of the State is now covered by the Trust's system and expansion in recent years has been to meet the increased load on the system.

Electric power is transmitted over considerable distances at very high voltages and is stepped down at substations and distribution centres.

Transmission lines of 275 kV link power stations at Port Augusta and Torrens Island to a major substation at Para from which 275 kV connections radiate to Magill, Cherry Gardens and Happy Valley substations serving the Adelaide metropolitan area. A further

# SOUTH AUSTRALIA ELECTRICITY SUPPLY



275 kV line has been built to Tailem Bend substation, which is the main supply point for the Lower Mallee and the South-East. One line from Port Augusta is tapped into a substation at Brinkworth to reinforce distribution to the mid-north area of the State.

**Electricity Trust of South Australia, Transmission Lines**  
**At 30 June**

Rated Voltage Unit	1967	1970	1973	1976	1979
		Route Kilometres			
275 kV .....	595	716	745	846	850
132 kV .....	2 010	2 232	2 581	2 581	2 595
66 kV .....	750	832	1 246	1 328	1 571
33 kV .....	3 410	3 499	3 487	3 602	3 701
19 kV (SWER)(a) .....	13 591	17 083	18 694	19 734	20 277
11 and 7.6 kV .....	9 024	10 731	12 076	13 701	15 002
Total .....	29 380	35 093	38 830	41 792	43 996

(a) Single wire earth return system.

Two 132 kV lines extend from Port Augusta to Adelaide and further 132 kV lines extend to Port Lincoln, Woomera and Leigh Creek. Other 132 kV lines connect Adelaide and Mannum, Cherry Gardens and Mobiling, Mannum and Tailem Bend. Two lines connect Tailem Bend and Mount Gambier.

In recent years there has been a progressive change from conventional overhead street mains to underground street mains in new subdivisions. In these subdivisions 11 kV and low voltage lines are installed underground. The Electricity Trust and local government authorities share the costs of conversion from overhead to underground reticulation in public areas such as parks and foreshores where aesthetic benefit to the general public would be gained.

During 1978-79 the Electricity Trust approved 13 new schemes recommended by the Electricity Reticulation Advisory Committee bringing the total number of schemes approved to forty-six.

The total number of consumers supplied directly by the Electricity Trust at 30 June 1979 was 542 526. During the past ten years, the number of consumers has increased by 141 117 or 35 per cent. In addition the Electricity Trust supplies approximately 8 500 consumers through local government authorities, mainly on Eyre Peninsula, taking supply in bulk from the Trust.

In the next table the numbers of Electricity Trust consumers in the various categories are given at selected dates.

**Electricity Trust of South Australia, Number of Consumers**  
**At 30 June**

Consumers	1967	1970	1973	1976	1979
Residential .....	321 731	353 289	392 314	431 859	463 917
Commercial .....	38 949	41 772	43 738	45 828	49 047
Industrial .....	19 956	22 776	25 615	28 221	29 546
Bulk and traction .....	8	8	12	11	16
Total .....	380 644	417 845	461 679	505 919	542 526

The next table shows electricity sold by the Electricity Trust for the last five years.

**Electricity Trust of South Australia, Sales of Electricity**  
**Year Ended 30 June**

Particulars	1975	1976	1977	1978	1979
MW.h					
Residential .....	1 905 615	2 025 616	2 193 993	2 249 688	2 413 188
Industrial .....	1 506 427	1 537 180	1 656 323	1 737 863	1 884 600
Commercial .....	825 685	894 795	968 860	1 019 160	1 101 538
Bulk supply .....	77 626	80 124	67 280	72 620	89 449
Public lighting .....	33 137	34 837	36 163	38 664	40 694
Pumping for major water pipelines .....	86 562	138 138	333 628	393 212	177 213
Total .....	4 435 052	4 710 690	5 256 247	5 511 207	5 706 682

**GAS**

The South Australian Gas Company, a privately owned company regulated by State legislation, was incorporated by Act of Parliament in 1861 to supply gas to Adelaide and surrounding villages. The first gas was produced at Brompton in 1863 and subsequent plants were opened at Port Adelaide in 1866 and Glenelg in 1875.

An Act authorising a second company, the Provincial Gas Company, was assented to in 1869. This company established a metropolitan works at Thebarton in 1871 and country works were opened at Gawler, Kapunda and Strathalbyn. In 1878 this undertaking was absorbed by the South Australian Gas Company and manufacturing at the Thebarton plant ceased. The country works were kept in operation until 1917. Gas was first produced at Port Pirie in 1892.

Following the development of higher pressure distribution facilities the South Australian Gas Company was able to centralise its metropolitan production at Brompton with the Port Adelaide and Glenelg plants ceasing production in 1922 and 1923 respectively. These plants together with the earlier Thebarton works were retained as holder stations. In 1928 a new gas works was opened adjacent to the Port River at Osborne. The Osborne Works were closed for several years during the 1930s depression.

Since the 1939-45 War a considerable expansion of manufacturing capacity and distribution facilities has taken place. This is evident from the following table which gives details of capital employed, number of consumers and length of mains at 30 June in selected years.

**South Australian Gas Company: Capital, Consumers and Mains  
At 30 June**

Particulars	1940	1950	1960	1970	1979
Capital employed (\$m) (a)	5.4	6.0	19.4	40.0	47.7
Number of consumers (b)	61 207	84 629	121 720	186 670	242 798
Length of mains (km) .....	1 455	1 677	2 525	3 603	4 939

(a) Total assets less current liabilities.

(b) Includes consumers of bottled gas.

The manufacture of gas by the carbonisation of black coal imported from New South Wales was the conventional method of production until the end of the 1939-45 War. Under this process large quantities of coke and tar are produced as by-products but a declining market for these residuals together with the development of alternative production methods has resulted in less emphasis in recent years on this method of production.

In 1948 and 1950 the company installed plant at Osborne and Brompton for the manufacture of carburetted water gas from oil distillate and coke. This plant was introduced to help meet peak winter loads and could be brought into production much more rapidly than carbonising retorts.

In 1964 the first of four reforming plants was installed at Brompton. These plants operated initially on refinery tail gases and modifications were subsequently made to enable all four plants to reform a wider range of feedstocks, including light virgin naphtha and natural gas. A similar plant was in operation at Port Pirie for reforming light virgin naphtha.

When natural gas became available, the South Australian Gas Company contracted with the producers for a supply of this indigenous fuel. All coal carbonising and carburetted water gas plants making gas for distribution in the metropolitan area were shut down and the reforming plants ceased to operate in 1971 when the conversion of all appliances to use natural gas was completed. One section of the coal carbonising plant has been retained at the Osborne Works for the manufacture of metallurgical grade coke. Gas resulting from carbonisation is used partly for heating the coal chambers, the remainder being sold.

Port Pirie has been supplied with natural gas which followed the completion of a \$2.5 million pipeline in June 1976. Natural gas from the line is supplied direct to industry, including Broken Hill Associated Smelters, and to all domestic consumers since conversion of domestic appliances to natural gas was completed in October 1977.

Gas is reticulated through most of the Adelaide metropolitan area and Port Pirie. In addition liquefied petroleum gas is distributed by reticulation at Mount Gambier by the Mount Gambier Gas Company Ltd (acquired by the South Australian Gas Company in June 1977), at Whyalla by the South Australian Gas Company, and is available elsewhere as bottled gas.

An inter-connected system of high and intermediate pressure mains traverses the metropolitan area, extending south to Hackham, north-east to Tea Tree Gully and north to Gawler. The pressure in these mains is reduced by means of governors for distribution to consumers.

The conversion of the metropolitan distribution system to use straight natural gas brought a marked change in the Company's operations. The Company is now concerned largely with the distribution and marketing of gas, rather than manufacturing. Great emphasis is placed on marketing gas to industry, where as a cheap, non-polluting fuel it is able to compete successfully with other fuels. This has produced the situation where industrial gas sales made up 63 per cent of all gas sold in 1979 compared with 14 per cent in 1969.

At 30 June 1979 the Company was maintaining 4 786 kilometres of mains in the metropolitan area serving 201 872 consumers with natural gas. The Port Pirie system involves 102 kilometres of mains serving 4 226 consumers. A distribution system has also been developed in Whyalla over the past eight years, and at 30 June 1979 involved 51 kilometres of mains serving 2 254 consumers. The distribution system at Mount Gambier serves 2 939 consumers. An additional 34 500 customers are supplied with liquefied petroleum gas in bottles.

## 8.7 HOUSING AND BUILDING

### HOUSING

A feature of housing development in South Australia has been the change from the use of stone to brick as the major building material. The familiar old-style stone houses are still to be seen in most of the settled parts of the State, especially in rural areas. The 1947 Census was the first at which houses with outer walls of brick outnumbered those with walls of stone.

The building materials used have been determined largely by the availability of building stone and deposits of clay suitable for brickmaking, and by the relative lack of natural timbers suitable for houses. In recent years brick veneer homes have become more popular, particularly in Urban Adelaide, but this is partly because of the poor building soil in some areas.

### DWELLINGS: CENSUS DATA

Information on housing is obtained mainly from particulars of dwellings collected at each census. For the purpose of the census a 'dwelling' is any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building. The term 'dwelling' includes houses, home units and flats, and in addition habitations ranging from a single-roomed shack to a multi-roomed hotel or institution. Dwellings have been classified as 'private' or 'non-private'. A private dwelling is normally a house or flat but it can also be a tent, houseboat, or caravan (if standing on its own block of land) and not occupied by members of the same household resident in an adjacent dwelling. Non-private dwellings are hotels, hostels, hospitals, non-private boarding houses, gaols, religious and charitable institutions, defence establishments and other communal dwellings. A caravan in a caravan park (whether permanently or temporarily) is treated as part of a non-private dwelling, as are self-contained units provided by commercial enterprises such as hotels, motels or guest houses.

Dwelling counts from the eight censuses to 1976 are shown in the next table: figures for censuses before 1966 exclude dwellings occupied solely by full-blood Aboriginals.

Dwellings in South Australia, Censuses 1921 to 1976

Census	Occupied			Unoccupied	Total Dwellings
	Private	Non-private	Total		
1921 .....	104 295	3 619	107 914	4 431	112 345
1933 .....	136 611	2 663	139 274	5 353	144 627
1947 .....	166 118	2 420	168 538	3 547	172 085
1954 .....	212 095	3 206	215 301	8 524	223 825
1961 .....	259 344	2 564	261 908	17 061	278 969
1966 .....	299 933	2 693	302 626	25 110	327 736
1971 .....	342 064	2 048	344 112	30 553	374 665
1976 .....	390 514	1 739	392 253	39 768	432 021

#### Occupied Dwellings

The next table gives details from the 1976 Census of dwellings and their occupants, according to the class of dwelling. Private dwellings were classified into the following five categories:

*Self-contained Dwellings*; include separate houses, semi-detached houses, terrace

houses, self-contained flats, home units, villa units, town houses, which were completely closed off with their own cooking and bathing facilities;

*Non-self-contained Dwellings*; include non-self-contained flats, bedsitting rooms, non-self-contained part of a detached house;

*Improvised Dwellings*; include sheds, garages, humpies, occupied on a permanent or semi-permanent basis;

*Mobile Dwellings*; include caravans, houseboats, tents;

*Private Boarding Houses*; private dwellings where three or more boarders were enumerated.

Dwellings and Number of Inmates by Class of Dwelling, South Australia, Census 1976

Class of Dwelling	Dwellings		Persons	
	Number	Proportion of Total	Number	Proportion of Total
		Per cent	Per cent	
Private dwellings:				
Self-contained .....	383 806	88.8	1 183 275	95.1
Non-self-contained .....	3 812	0.9	8 792	0.7
Improvised .....	1 662	0.4	4 761	0.4
Mobile .....	1 132	0.3	2 741	0.2
Private boarding houses .....	102	0.0	427	0.0
Total occupied private dwellings .....	390 514	90.4	1 199 996	96.4
Non-private dwellings .....	1 739	0.4	43 149	3.5
Total occupied dwellings .....	392 253	90.8	1 243 145	99.9
Campers out, migratory .....			1 610	0.1
Unoccupied private dwellings ..	39 768	9.2	—	—
Total dwellings and population ...	432 021	100.0	1 244 755	100.0

The classification of different types of dwellings changed between the 1971 and 1976 Censuses. Intercensal comparisons are therefore restricted to total dwellings only, and should not be applied to individual categories.

The percentage of persons enumerated in private dwellings was 95.4 at the 1966 Census, and by 1971 this percentage had increased slightly to 96.1. The percentage of persons enumerated in non-private dwellings decreased from 4.3 to 3.7. At the 1976 Census the percentage of persons enumerated in non-private dwellings had decreased further to 3.5 while private dwellings had increased to 96.4.

#### Occupied Private Dwellings

There were 342 064 occupied private dwellings at 30 June 1971 and by 30 June 1976 this number had increased to 390 514. Characteristics of these dwellings are shown in the tables which follow. The columns headed 'Separate Self-contained Dwellings' refer to those dwellings which were described by the householder as being self-contained (see definition above) and also stated as not being attached to any other dwelling.

The number of rooms includes kitchen and enclosed sleep-out, but does not include bathroom, toilet, pantry, laundry or storerooms or halls. A combined living-dining room was counted as one room.

**Occupied Private Dwellings by Number of Rooms, South Australia  
Censuses 1971 and 1976**

Number of Rooms per Dwelling	30 June 1971		30 June 1976			Per cent
	Total	Separate Self- contained Dwellings	Other	Total	Proportion of Total	
1 .....	3 636	126	1 182	1 308	0.3	
2 .....	7 496	820	3 758	4 578	1.2	
3 .....	19 637	2 938	13 770	16 708	4.3	
4 .....	46 756	19 240	29 706	48 946	12.5	
5 .....	160 110	110 660	31 056	141 716	36.3	
6 .....	69 289	95 010	8 814	103 824	26.6	
7 .....	22 786	40 532	2 318	42 850	11.0	
8 and over .....	12 354	23 932	1 580	25 512	6.5	
Not stated .....	—	938	4 134	5 072	1.3	
Total .....	342 064	294 196	96 318	390 514	100.0	
Average number of rooms per dwelling(a) ..	5.1	5.7	4.2	5.4	..	

(a) Excludes 'Not Stated'.

The largest increase in the five-year period was in six-roomed dwellings. In 1971 six-roomed dwellings were 20.3 per cent of all occupied dwellings; by 1976 this percentage had increased to 26.6. The total increase in private dwellings was 48 450 and 34 535 of these were six-roomed dwellings.

The following table gives details of occupied private dwellings by the type of occupancy. The proportion of dwellings owned, or being purchased by instalments, remained fairly constant at approximately 68 per cent between the 1971 and 1976 Censuses. This can be compared with an increase of 9.6 per cent over the same period in the number of dwellings being rented.

**Occupied Private Dwellings by Nature of Occupancy, South Australia  
Censuses 1971 and 1976**

Nature of Occupancy	30 June 1971		30 June 1976	
	Total	Proportion of Total	Total	Proportion of Total
Owner .....		Per cent		Per cent
Purchaser .....	233 715	68.3	114 710	29.4
Owner/Purchaser undefined .....	n.a.	n.a.	148 352	38.0
Tenant of Housing Trust .....	34 174	10.0	1 114	0.3
Tenant, other .....	59 640	17.4	36 224	9.3
Other .....	9 131	2.7	66 598	17.1
Not stated .....	5 404	1.6	17 992	4.6
Total .....	342 064	100.0	390 514	100.0

At the 1976 Census, occupants purchasing their dwelling were asked to identify the source of the mortgage(s) or contract(s) of sale on the dwelling. The following table summarises the results. Note that the column headed 'Additional Mortgages' can include a dwelling more than once, for dwellings which had three or more mortgages, thereby affecting to some degree the figures in the column 'All Mortgages'.

**Mortgages by Source for Occupied Private Dwellings Being Purchased  
South Australia, 30 June 1976**

Source of Mortgage	Number of Mortgages			
	First Mortgage	Additional Mortgages	All Mortgages	Proportion of Total
Trading bank .....	27 712	3 248	30 960	17.4
Savings bank .....	59 638	3 234	62 872	35.4
Building Society .....	10 840	648	11 488	6.5
Housing Trust .....	7 438	5 038	12 476	7.0
Other .....	41 410	16 796	58 206	32.7
Not stated .....	1 314	530	1 844	1.0
Total .....	148 352	29 494	177 846	100.0

The following table gives details of occupied private dwellings by material of outer walls.

**Occupied Private Dwellings by Material of Outer Walls, South Australia  
Censuses 1971 and 1976**

Material of Outer Walls	30 June 1971		30 June 1976	
	Total	Separate Self-contained Dwelling	Other	Total
Brick, brick veneer .....	228 789	189 282	68 800	258 082
Stone .....	56 679	48 214	10 624	58 838
Concrete, cement block ...	10 154	14 846	7 268	22 114
Timber, weatherboard ....	13 833	9 906	936	10 842
Metal .....	7 785	4 870	1 558	6 428
Fibro-cement, asbestos ....	23 128	25 948	2 542	28 490
Other .....	1 696	262	338	600
Not stated .....	—	868	4 252	5 120
Total .....	342 064	294 196	96 318	390 514

At the 1971 Census 67 per cent of all occupied private dwellings had outer walls of brick or brick veneer as compared with 66 per cent of the 1976 Census. Dwellings of stone walls decreased from 17 per cent of all occupied private dwellings in 1971 to 15 per cent in 1976.

At the 1976 Census occupants of private dwellings were asked what type of fuel or power was used for the purposes of cooking, lighting, living room heating and bathroom water heating. The next table summarises the results for South Australia.

**Occupied Private Dwellings by Power or Fuel Used, South Australia**  
**30 June 1976**

Power or Fuel Used	Purpose			
	Cooking	Lighting	Living Room Heating	Bathroom Water Heating
Coal, coke or briquettes ...	474	—	2 502	558
Wood .....	10 322	—	39 900	8 330
Electricity .....	200 432	377 006	141 092	216 712
Gas .....	172 590	884	82 524	145 598
Oil, kerosene .....	1 036	374	100 276	1 438
Solar energy .....	20	—	158	374
Other .....	50	166	3 226	614
No fuel used .....	94	62	3 106	2 028
Not stated .....	5 496	12 022	17 730	14 862
Total .....	390 514	390 514	390 514	390 514

At the 1966, 1971 and 1976 Censuses each householder was asked to state the number of motor vehicles (excluding motor cycles, scooters and tractors) used by members of that household that were garaged or parked at or near that dwelling on Census night. Data were obtained only for private dwellings.

**Occupied Private Dwellings by Number of Motor Vehicles, South Australia**  
**Censuses 1966, 1971 and 1976**

Number of Vehicles	1966		1971		1976	
	Dwellings	Proportion of Total	Dwellings	Proportion of Total	Dwellings	Proportion of Total
No vehicles .....	58 264	Per cent 19.4	56 964	Per cent 16.7	52 306	Per cent 13.4
One vehicle .....	155 999	52.0	173 834	50.8	184 214	47.2
Two vehicles .....	58 880	19.6	78 907	23.1	108 262	27.7
Three or more vehicles .....	20 967	7.0	27 338	8.0	36 528	9.4
Not stated .....	5 823	1.9	5 021	1.5	9 204	2.4
Total .....	299 933	100.0	342 064	100.0	390 514	100.0

## BUILDING

### BUILDING CONTROL

The Building Act, 1923-1965 (the repealed Act) gave local government authorities power to control building operations within their municipality or district. This power was not automatic but followed a request from a local government authority for all, or a specified portion, of its area to be brought under the Act. The Building Act, 1970-1976 has brought each area of a local government municipality or district within the State under its provisions. However, the Act provides that any council to the area of which, or portion of the area of which, the repealed Act did not apply may petition the Governor for a proclamation that the Act (or any specified portion of the Act) shall not apply within its area or portion of its area. In local government areas outside the jurisdiction of the Act certain provisions under the Local Government Act, 1934-1979 apply.

Persons wishing to erect or alter buildings on land within an area to which the Building Act applies are required to submit to a building surveyor appointed by the local government authority technical details, particulars, plans, drawings and specifications of the work proposed and to receive written approval before commencing operations. Authorities concern themselves with such things as location of buildings, the material used, the height of ceilings and the provision of ventilation and drainage. They have the power to disapprove building work only where such work does not comply with the requirements of the Building Regulations, 1973-1978, subject to a right of appeal to building referees. Following the approval of the building work, local government building inspectors normally visit the construction site to inspect footings and foundations and may visit the site at other times to check that the requirements of the regulations and any council conditions are being complied with.

In addition to administering the general site and structural requirements of the Act, councils could, under the repealed Act, make by-laws prescribing, *inter alia*, the minimum size of building allotments (which may have been higher than those prescribed in the Act), the minimum sizes of houses, etc. One of the most important by-laws enabled the defining of particular areas or zones within which the nature of buildings and their use may be restricted. Thus certain areas may be proclaimed residential areas with industrial and commercial premises, beyond those already in existence, prohibited; other areas were designated as commercial or industrial zones.

In all local government areas which are subject to an authorised development plan under the Planning and Development Act, 1966-1978, the provisions of the above by-laws have no effect and are invalid. During 1971 the Builders Licensing Act, 1967-1976 came into force with provisions for the licensing of builders. The Builders Licensing Board of South Australia was established under the Builders Licensing Act, 1967-1976 to issue, subject to the provisions of the Act, general builders' licences, provisional general builders' licences and restricted builders' licences to applicants.

### BUILDING OPERATIONS

Details of building operations in South Australia are compiled from returns collected from all builders of new dwellings and new other building valued at \$10 000 and over. The statistics relate only to buildings as distinct from other construction activity such as roads, bridges, earthworks and water storage. Alterations and additions of \$10 000 and over to existing buildings other than dwellings are included with new buildings but those to dwellings are shown as a separate item.

All values shown exclude the value of land and unless otherwise stated represent the anticipated or actual value of buildings upon completion.

#### **Building Approvals**

The next table shows the value of new building, and alterations and additions valued at \$10 000 and over on completion for which approval was given during 1977-78 and 1978-79.

In addition to information on permits issued to private persons and organisations for building in areas subject to building control, particulars have been included of buildings known to be projected or to have been started in areas outside building control and details of contracts let or expenditure authorised by government and semi-government authorities.

In using approvals as an indicator of building activity it should be noted that certain projects may be cancelled, delayed or altered and resubmitted for approval, that large projects may be spread over a number of years, and that building costs may vary over the period of construction.

## Building Approvals, South Australia

Type of Building	1977-78			1978-79		
	Private	Govt	Total	Private	Govt	Total
\$'000						
New houses .....	196 741	21 829	218 570	181 448	29 326	210 774
New other dwellings .....	25 376	15 451	40 827	18 397	6 788	25 185
Alterations and additions to dwellings (a) .....	19 803	195	19 998	21 951	122	22 074
Hotels, etc. ....	6 541	510	7 050	7 387	923	8 310
Shops .....	25 666	50	25 716	55 776	199	55 974
Factories .....	14 395	4 269	18 664	25 675	10 146	35 821
Offices .....	20 700	12 265	32 966	24 861	8 147	33 008
Other business premises .....	11 384	1 068	12 452	14 290	682	14 972
Education .....	4 299	50 716	55 014	5 519	23 061	28 580
Religion .....	2 534	—	2 534	2 901	—	2 901
Health .....	2 832	24 254	27 087	3 679	6 916	10 595
Entertainment, recreation .....	4 193	3 665	7 858	11 777	2 731	14 509
Miscellaneous .....	4 074	7 869	11 943	8 681	16 863	25 544
Total value of building .....	338 539	142 140	480 678	382 342	105 905	488 246

(a) Valued at \$10 000 and over.

## Buildings Under Construction

At the end of 1978-79 new buildings with an anticipated value when completed of \$348 698 000 were in the process of construction, with work done on these buildings valued at \$187 949 000. There were 2 579 houses and 1 173 other dwellings in the course of construction, having an anticipated value when completed of \$123 748 000.

## Value of Work Done

One of the measures of building activity is that of value of work done, *i.e.* of work actually carried out on buildings during the period. Information on the value of work done on owner-built houses is not collected; however, an estimate based on the value of houses commenced, completed and under construction is calculated and this amounted to \$44.6 million, \$56.1 million and \$56.2 million in the years 1976-77, 1977-78 and 1978-79 respectively. The estimated values of work done on owner-built houses are included in the following table.

Buildings: Value of Work Done  
South Australia

Type of Building	1974-75	1975-76	1976-77	1977-78	1978-79
\$'000					
Houses .....	165 261	244 471	325 272	254 831	213 937
Other dwellings .....	49 981	61 130	68 137	50 226	37 582
Total dwellings .....	215 241	305 600	393 409	305 057	251 519
Alterations and additions to dwellings .....	4 004	7 178	15 087	19 226	20 796
Hotels, etc. ....	3 853	5 613	4 275	9 372	6 558
Shops .....	12 105	12 820	15 140	25 732	45 600
Factories .....	28 780	21 795	35 699	26 457	21 205
Offices .....	31 369	39 890	39 895	51 364	43 709
Other business premises .....	11 137	15 694	23 048	13 941	14 589
Education .....	56 281	48 176	37 550	51 165	55 160
Religion .....	1 064	1 658	3 538	4 060	2 447
Health .....	19 803	24 055	31 907	29 847	28 398
Entertainment, recreation .....	6 214	11 053	11 613	10 323	17 606
Miscellaneous .....	8 676	5 560	9 358	12 940	17 051
Total buildings .....	398 525	499 091	620 519	559 483	524 637

## Buildings Commenced

A building is regarded as having been commenced when expenditure on building work

is first reported. In the following table, commencements during 1977-78 and 1978-79 have been classified according to ownership at the date of commencement. Almost all houses recorded under the 'Government' heading were being built for the South Australian Housing Trust, many of them being intended for sale on completion.

#### Buildings Commenced, South Australia<sup>(a)</sup>

Type of Building	1977-78			1978-79		
	Private	Govt	Total	Private	Govt	Total
\$'000						
New houses .....	200 595	30 956	231 551	180 226	19 528	199 754
New other dwellings .....	24 070	15 368	39 438	19 907	11 985	31 892
Alterations and additions to dwellings (b) .....	18 393	138	18 531	20 494	178	20 672
Hotels, etc .....	4 780	660	5 440	8 112	43	8 155
Shops .....	44 563	74	44 636	27 620	76	27 695
Factories .....	17 837	6 517	24 354	13 212	8 219	21 431
Offices .....	29 384	18 087	47 470	25 211	10 663	35 874
Other business premises .....	10 003	2 700	12 703	13 419	5 143	18 562
Education .....	10 876	41 943	52 819	6 902	45 824	52 726
Religion .....	3 377	—	3 377	1 962	—	1 962
Health .....	5 536	10 702	16 237	3 583	18 247	21 830
Entertainment, recreation .....	5 479	4 255	9 733	6 119	12 724	18 843
Miscellaneous .....	6 031	6 989	13 020	3 796	15 168	18 963
Total value of buildings .....	380 923	138 388	519 310	330 562	147 798	478 360

(a) Anticipated completion value.

(b) Valued at \$10 000 and over.

#### Buildings Completed

Details of buildings completed and new dwellings completed for the years 1974-75 to 1978-79 are given in the next two tables. A building is regarded as having been completed when it is reported as completed or in the case of owner-builders is reported as completed or substantially completed and occupied.

#### Buildings Completed, South Australia

Year	Number of Dwellings		Value of Buildings				
	Houses	Other Dwellings	Houses	Other Dwellings	Alterations and Additions to Dwellings		
							Total
\$'000							
1974-75 .....	9 071	3 802	166 744	44 916	3 618	152 123	367 403
1975-76 .....	9 921	4 032	221 287	61 462	6 813	189 216	478 778
1976-77 .....	12 112	3 275	322 569	64 921	14 016	197 437	598 943
1977-78 .....	8 996	2 681	272 770	59 797	19 414	245 245	597 226
1978-79 .....	6 808	1 589	221 273	38 822	20 279	231 821	512 196

#### Number of New Dwellings Completed, South Australia

Type of Dwelling	1974-75	1975-76	1976-77	1977-78	1978-79
<b>Private:</b>					
Contract-built houses .....	7 245	7 520	9 548	5 977	4 142
Owner-built houses(a) .....	638	922	1 026	1 410	1 350
Total houses .....	7 883	8 442	10 574	7 387	5 492
Other dwellings .....	3 303	3 254	2 597	1 974	968
Total private dwellings .....	11 186	11 696	13 171	9 361	6 460

**Number of New Dwellings Completed, South Australia (continued)**

Type of Dwelling	1974-75	1975-76	1976-77	1977-78	1978-79
<b>Government:</b>					
Houses .....	1 188	1 479	1 538	1 609	1 316
Other dwellings .....	499	778	678	707	621
Total government dwellings .....	1 687	2 257	2 216	2 316	1 937
Total all dwellings .....	12 873	13 953	15 387	11 677	8 397

(a) Owner-built houses are houses erected without services of contractor for whole job.

The value of buildings, other than dwellings completed over the same period is shown below. Included under 'other business premises' are service stations, warehouses and communication buildings and under 'miscellaneous' are defence establishments, buildings for law and order, and certain institutional premises.

### **Value of Buildings Other Than Dwellings Completed, South Australia**

Type of Building	1974-75	1975-76	1976-77	1977-78	1978-79
			\$'000		
Hotels, etc. ....	5 085	5 118	4 850	7 484	7 479
Shops .....	10 967	14 468	10 879	20 040	25 710
Factories .....	21 684	19 619	35 211	33 091	21 681
Offices .....	25 824	34 471	47 196	45 900	52 416
Other business premises .....	9 323	15 829	23 761	16 963	13 203
Education .....	33 514	67 628	37 007	43 875	58 645
Religion .....	758	1 639	3 202	4 313	2 545
Health .....	22 442	16 234	12 126	52 513	23 074
Entertainment, recreation .....	9 889	8 256	14 371	9 925	13 748
Miscellaneous .....	12 639	5 951	8 832	11 141	13 319
Total .....	152 123	189 216	197 437	245 245	231 821

## New Houses—Material of Outer Walls

In the next table new houses are classified by the materials used in the outer walls.

## New Houses: Material of Outer Walls, South Australia

Year	Brick, Concrete, Stone		Brick Veneer and Stone Veneer		Asbestos-cement		Other	
	Number	Value	Number	Value	Number	Value	Number	Value
		\$'000		\$'000		\$'000		\$'000
					COMMENCED			
1974-75 .....	3 273	78 696	3 479	61 651	1 467	19 210	101	1 579
1975-76 .....	4 072	116 145	5 522	122 232	1 654	27 187	239	4 646
1976-77 .....	3 298	113 083	5 941	155 811	1 597	30 915	281	6 209
1977-78 .....	2 399	92 554	3 803	107 641	1 176	24 194	273	7 162
1978-79 .....	2 004	82 902	2 897	89 430	932	21 017	250	6 405
					COMPLETED			
1974-75 .....	4 116	87 994	3 633	61 377	1 224	15 844	98	1 531
1975-76 .....	3 690	98 214	4 452	93 929	1 549	24 929	230	4 219
1976-77 .....	3 716	120 848	6 506	164 579	1 633	31 399	257	5 742
1977-78 .....	2 801	107 034	4 609	131 178	1 335	27 997	251	6 560
1978-79 .....	2 068	86 816	3 465	104 402	1 016	22 912	259	7 144

A plentiful supply of clay and building stone together with a paucity of suitable timbers in South Australia resulted in more houses being built of solid construction than brick veneer or other construction until 1974-75. In 1977-78 brick veneer houses constituted 50 per cent of commencements. Although a large proportion of brick veneer houses are built by the South Australian Housing Trust a wider acceptance of this type of construction is indicated by the increasing number being erected by private contractors.

### **Building Employment**

Details of building employment in South Australia are given in the next table. The figures are an average of the number of persons employed on four days in the year, namely at the end of September, in mid-December and at the end of March and June. They include all contractors and sub-contractors, and employees of contractors, sub-contractors and government instrumentalities, who were engaged on the construction, alteration, repair and maintenance of buildings. Excluded are persons working on owner-built houses or for contractors or sub-contractors who undertake only alterations, additions, repairs and maintenance. Persons 'actually engaged' include those temporarily laid off because of weather. Some duplications may occur as a result of frequent movement between jobs or because some persons (such as electricians) may work on several buildings which are under construction simultaneously.

**Building Employment, South Australia**

Classification	1973-74	1974-75	1975-76	1976-77	1977-78
PERSONS ENGAGED					
Occupational status:					
Contractors .....	767	963	938	901	853
Sub-contractors .....	4 447	3 806	4 127	4 604	4 239
Wage earners .....	11 026	9 557	8 942	8 635	6 941
Trade:					
Carpenters .....	3 843	3 660	3 588	3 638	3 050
Bricklayers .....	2 620	2 176	2 106	2 163	1 806
Painters .....	1 365	1 219	1 166	1 244	1 055
Electricians .....	1 106	994	921	932	872
Plumbers .....	1 523	1 306	1 265	1 369	1 148
Builders labourers .....	2 202	1 935	1 955	1 809	1 538
Other .....	3 581	3 037	3 007	2 985	2 564
Total .....	16 239	14 325	14 007	14 140	12 033

The average employment figure of 12 033 for 1977-78 was made up of 6 003 persons working on new dwellings, 5 487 working on other new buildings and 543 employed on additions, alterations, repairs and maintenance.

### **Location of New Dwellings**

In recent years the greatest development has occurred in the local government areas of Noarlunga, Salisbury and Tea Tree Gully; during the five years 1973-74 to 1977-78, new dwellings in these areas accounted for 30 per cent of the total State completions. Of the country local government areas, Port Augusta recorded the greatest number of completions in 1977-78.

Location of New Dwellings Completed, South Australia<sup>(a)</sup>

Local Government Area	1974-75	1975-76	1976-77	1977-78	1978-79
Burnside (C) .....	363	263	159	167	107
Campbelltown (C) .....	386	486	553	303	173
Elizabeth (C) .....	175	171	212	282	291
Enfield (C) .....	397	158	123	130	80
Henley and Grange (C) .....	146	84	100	60	55
Marion (C) .....	520	457	790	597	354
Meadows (DC) .....	575	495	804	515	566
Mitcham (C) .....	427	347	504	338	194
Mount Barker (DC) .....	115	187	243	165	154
Mount Gambier (C) .....	186	195	270	154	91
Munno Para (DC) .....	336	271	286	641	543
Murray Bridge (DC) (b) .....	176	253	189	155	112
Noarlunga (C) .....	1 271	1 640	1 851	1 236	706
Payneham (C) .....	150	180	53	74	59
Port Adelaide (C) .....	157	263	399	279	120
Port Augusta (C) .....	113	116	158	217	141
Port Elliot and Goolwa (DC) .....	129	156	173	160	140
Port Lincoln (C) .....	79	117	106	83	48
Salisbury (C) .....	1 288	1 567	1 621	1 074	525
Stirling (DC) .....	215	212	275	222	187
Tea Tree Gully (C) .....	1 083	1 254	1 573	951	643
Unley (C) .....	313	266	186	234	108
Victor Harbor (DC) (c) .....	126	77	122	151	107
West Torrens (C) .....	259	292	155	145	74
Whyalla (C) .....	278	267	276	14	27
Willunga (DC) .....	143	184	381	212	143
Woodville (C) .....	835	1 154	873	608	459
Other (d) .....	2 647	2 851	3 010	2 550	2 190
Total State .....	12 888	13 963	15 445	11 717	8 397

(a) Dwelling units comprise houses and other dwellings plus dwellings attached to other new buildings.

(b) Includes Mobiolong (DC) and Murray Bridge (M) before amalgamation on 4 April 1977.

(c) Includes Encounter Bay (DC) and Victor Harbor (M) before amalgamation in October 1975.

(d) Includes unincorporated areas.

(C) Municipality with city status    (M) Municipality    (DC) District Council

## THE SOUTH AUSTRALIAN HOUSING TRUST

The South Australian Housing Trust was established under the South Australian Housing Trust Act, 1936. In 1940, when the Housing Improvement Act was assented to, the Trust became the housing authority to administer the Act and the Trust's powers were extended.

Since 1942, the Trust has held all its property on behalf of the Crown and in 1965 was made subject to the control of the Minister administering the Act.

Founded to provide low income housing and to house workers near places of employment, the Trust has developed and changed throughout its history to meet changing needs. In the late 1940's the Trust's prime concern became the alleviation of the housing shortage and support for the building industry. In the 50's and early 60's the Trust was a total development authority, fostering both economic development and new areas of settlement. More recently, the Trust has again concentrated on residential development, including the development of new forms of housing.

The beginning of the 1978-79 financial year marked the start of the new three year

Commonwealth-State Housing Agreement. The Housing Trust is the housing authority for South Australia under the Housing Assistance Act, 1978.

### Rental Dwellings

By 30 June 1979 the Trust had completed 41 048 rental dwellings. This total comprised 30 519 semi-detached houses, walk-up flats, one and two storey maisonettes and villa flats, 7 110 single unit houses, 2 117 pensioner cottage flats and 1 302 existing dwellings purchased and upgraded.

Rents of five roomed (three bedrooms) semi-detached bungalows ranged from \$23.50 per week for houses of the older type; to \$25.00 per week for the newer type houses. Single unit rents ranged between \$29.00 and \$38.00 per week. Two bedroomed villa flats were let at \$30.00 per week whilst the weekly rentals of two or three storey flats in the Adelaide metropolitan area ranged from \$26.50 for one bedroomed flats to \$28.50 for two bedroomed flats. With few exceptions, rentals for attached, one and two storey maisonettes and town houses with three bedrooms ranged between \$32.50 and \$39.00 per week.

The exceptions were town houses at West Lakes, Hackney, Kent Town and in the City of Adelaide where rents range from \$45.50 for two bedrooms to \$79.50 for three bedrooms and a family room.

A total of 9 403 applications for rental accommodation were registered during 1978-79 compared with 9 367 the previous year.

To assist those who have difficulty in meeting the rent required, the Trust has developed a rent reduction scheme. For example, the current vacancy rent for a Trust three bedroomed semi-detached bungalow is \$25.00 per week. In a single income family, this rent would only be charged when the bread-winners gross weekly wage was at least \$135.00. Fifty-four per cent of families housed during 1978-79 had incomes below this figure. It is estimated that during 1978-79 rent reductions would have amounted to more than \$5.7 million. At 30 June 1979, 31 per cent of the Trust's 41 048 tenants were paying reduced rents.

### Housing for Aborigines

On 1st July 1978 the States Grants (Aboriginal Assistance) Housing Agreement replaced the Statement of Purposes, which had previously governed Commonwealth/State relations in Aboriginal housing.

Under the old agreement, the Aboriginal Housing Board of South Australia and the Trust worked together to develop a satisfactory housing program for Aboriginals. So successful were the results of this program that a number of its achievements and policies were incorporated in the new Agreement. The co-operative relationship between the Board's Secretariat and the Trust's Aboriginal Funded Unit will be further enhanced when the Board's Secretariat moves into the Trust's head office. In 1978-79 housing was provided for 118 Aboriginal families.

A scheme exists to enable Aboriginal tenants to purchase the houses they occupy. A scheme whereby Aboriginal apprentices were indentured to a Ceduna builder proved successful and will be extended. It is the intention of the Trust and the Board to employ these apprentices on the maintenance of Aboriginal funded houses when they complete their training.

### Housing for the Aged

In 1953 the Trust began building cottage flats for pensioners and elderly people. By 30 June 1979 the Trust had let 2 117 cottage flats and built 865 for charitable and non-profit organisations. The Trust rents for pensioners were \$7.50 per week for a one bedroomed cottage flat and \$12.50 per week for a two person cottage flat.

The rents of all Trust accommodation occupied by the aged are heavily subsidised and the growing proportion of the elderly in the community has major financial as well as social implications for the Trust. In 1978-79 the Trust received a further 744 applications for cottage flats.

### Purchase of Houses for Rental Purposes

In the year ended 30 June 1979 the Trust purchased a further 204 older houses making a total of 1 302 acquired since 1972. After renovation these houses are let to applicants whose circumstances particularly require they live in inner, stable suburbs with established services such as public transport, kindergartens, schools, medical, para-medical and other support services.

### Special Purpose Housing

The Trust continued in 1978-79 to provide rental accommodation to various public, private and voluntary organisations whose work caters for the needs of some of the disadvantaged members of the community; in particular, the handicapped, the aged and women with dependent children.

### Priority Housing Assistance

There were 676 requests for assistance under the Trust's Priority Referral Scheme in the year 1978-79, an increase of 23 per cent. Of the total, 337 were received from the Department for Community Welfare and the remaining 299 from 56 other agencies: public, private and voluntary.

Of the 676 referrals received, 446 (66 per cent) were afforded a priority in housing, each submission having been considered on its merits.

### Dwellings for Sale

The Trust began building houses for sale to middle-lower income applicants in 1946.

During 1978-79 the Trust sold 1 119 new houses; 860 of these were sold in the Adelaide Metropolitan Area and 259 in the country areas.

The majority of purchasers (69 per cent) were under 35 years of age and 67 per cent of all houses sold were bought by applicants earning less than \$200.00 per week.

The Rental Purchase Scheme, which was introduced in 1962 ceased in 1978-79. During this period 8 144 low income earners purchased a three bedroomed brick veneer house with a forty-year low interest loan financed under the Commonwealth-State Housing Agreements.

Under the Trust House Purchase Scheme applicants are offered a choice of 26 designs of detached houses and attached town houses spread over various estates.

The Trust purchase schemes particularly aim to assist the middle-lower income groups of the community and the price ranges from \$32 000 to \$40 000. Included in the purchase price are a three bedroomed house, land, fencing, concrete drives and paving, connections to mains, sewer, gas and electricity, road charges, transfer costs, stamp duty, ceiling insulation, hot water service, cooker, kitchen exhaust fan, built-in kitchen cupboards and linen press.

As in the case of Trust rental housing, all its purchase houses are built by private enterprise building contractors under Trust architectural supervision.

Details of dwellings completed by the Trust since its inception, both for rental and sale, are given in the following table.

**South Australian Housing Trust, Number of Dwellings Completed<sup>(a)</sup>**

Period	Dwellings				Rural Dwellings including Soldier Settlers	Total
	Single Units	Double Units <sup>(b)</sup>	Cottage Flats	Other		
1937-74 .....	41 147	(c) 25 981	2 403	2 150	1 234	72 915
1974-75 .....	1 118	269	121	81	—	1 589
1975-76 .....	1 506	630	56	84	—	2 276
1976-77 .....	1 473	505	135	31	—	2 144
1977-78 .....	1 752	121	199	123	—	2 195
1978-79 .....	1 596	210	68	54	—	1 928
Total .....	48 592	27 716	2 982	2 523	1 234	83 047

(a) Excludes emergency and temporary dwellings.

(b) Number of individual dwelling units.

(c) Includes a small number of triple-units.

**Industrial and Commercial Properties**

The Trust is involved in the construction of industrial and commercial properties to assist in the State's development. The construction or purchase of factories by the Trust requires the recommendation of the Industries Development Committee and the consent of the Governor. The factories are usually leased with an option to purchase.

During 1978-79 the Trust completed a factory of nearly 4 000 square metres at Holden Hill and a bottling plant and warehouse of nearly 10 000 square metres at Nuriootpa in the Barossa Valley. Industrial estates have been developed by the Trust at Lonsdale, Salisbury South, Elizabeth South, Elizabeth West, Holden Hill, Port Augusta, Murray Bridge and Mount Gambier. Another at Smithfield will be available in the next financial year.

To the south of Adelaide the Trust is developing the Noarlunga Centre complex by bringing together Government and commercial investment in the provision of extensive community facilities. When completed, the Centre will include a recreation centre, private hospital, office blocks, community health centre, community college and transport interchange. The shopping centre part of the complex, The Colonnades, was opened in October 1979.

At 30 June 1979 the number of shops let by the Trust was 397 and the total number of factories occupied was sixty-two.

**Sub-standard Housing**

To regulate the rents for sub-standard housing the Housing Improvement Act, 1940-1978 vests in the South Australian Housing Trust power to declare a house sub-standard, and fix a maximum rent on it for such time as the declaration remains in force.

The Act provides that before the Trust declares any house to be sub-standard, it must notify the owner of its intention to do so and then allow a period of time for the necessary improvements to be made. If the house is subsequently found to remain in a sub-standard condition, a maximum rent fixation is made and then strictly controlled for such time as the house remains in a sub-standard classification.

In 1978-79 the Trust inspected 2 243 houses, commenced proceedings under the Housing Improvement Act on 531 of these properties, and fixed maximum rents on 345 houses.

## HOUSING AGREEMENTS

Several Housing Agreements between the Commonwealth and the State have operated over the years and details of the earlier legislation were included on pages 374-5 of the *South Australian Year Book 1978*.

In terms of current Commonwealth legislation, the *Housing Assistance Act 1978*, the Commonwealth advanced to the State during 1978-79 a total of \$47 368 000, of which \$22 565 000 was made available to the South Australian Housing Trust for housing purposes and the balance of \$24 803 000 to Home Purchase Assistance Account. Advances made under the Agreement will be repaid over fifty-three years at concessional rates of interest, 4.5 per cent per annum for funds directed to home purchase assistance and 5.0 per cent per annum for rental housing.

## Advances for Housing, South Australia

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
\$'000					
Advances for year:					
Housing Trust .....	33 560	33 560	33 560	34 810	22 565
Home builders accounts (a) .....	22 800	22 800	22 800	23 650	24 803
Total .....	56 360	56 360	56 360	58 460	47 368
Liability at end of year (b):					
Housing Trust .....	191 959	225 531	259 226	293 110	313 144
Home builders accounts .....	151 648	173 351	194 896	217 127	240 336
Total .....	343 607	398 882	454 122	510 237	553 480

(a) For 1978-79, the Home Purchase Assistance Account.

(b) Under Housing Agreements only.

## HOME SAVINGS GRANT SCHEME

The Commonwealth Government's Home Savings Grant Scheme, introduced in January 1977, is administered by the Department of Housing and Construction.

The Scheme provides tax-free grants of up to \$2 000 to assist first home buyers who are Australian citizens or have a right of permanent residence in Australia provided they have held savings in an acceptable form for at least three years prior to buying or building the home. Lesser grants are payable for savings over one or two completed years. Grants are made on the basis of \$1 for each \$3 saved during the period.

A value limit applies to homes acquired after 24 May 1979. For homes valued at \$35 000 or less a full grant is payable, depending on savings, but the grant is reduced proportionately for values between \$35 000 and \$40 000. A grant is not payable for homes exceeding the limit of \$40 000.

Acceptable forms of savings include savings banks accounts, fixed deposits with trading banks, savings with registered building societies and credit unions, and payments made for land on which the house is being built.

## DEFENCE SERVICE HOMES SCHEME

The Defence Service Homes Scheme is administered by the Defence Service Homes Corporation.

The Scheme originated in the War Service Homes Commission which was set up in 1919 to help provide homes for ex-servicemen and their dependants. Persons currently eligible for assistance include ex-servicemen and women of the Australian Forces and Nursing Services who were enlisted, or appointed for or employed on active service outside Australia in the 1914-18 War, the 1939-45 War, Korea, Malaya or Vietnam, or in any other areas as specified from time to time by the Commonwealth Government. In addition, National Servicemen and Permanent Members of the Forces may be eligible if their period of service did not cease before 7 December 1972.

Also eligible are certain other ex-service personnel who served in British Forces and who were resident in Australia before enlistment, and certain members of the Mercantile Marine Services. Assistance may also be granted to the widow or in some cases to the widowed mother of an eligible person, and to a representative of an approved welfare organisation who, subject to certain conditions, served outside Australia on or after 3 September 1939 with a body, contingent or detachment of the Australian Forces.

Assistance is given for building a home, in purchasing a new or existing home, or in discharging a mortgage which has been arranged with the prior approval of the Corporation. In certain circumstances a person who has not received the maximum loan may receive a further loan to undertake certain additions. The maximum loan available is \$15 000 and the interest rate is 3.75 per cent for the first \$12 000 lent and 7.25 per cent on the balance of the loan above \$12 000.

#### Defence Service Homes Scheme, South Australia

Year	Activities During Year		Advances Outstanding at End of Year	
	Homes Provided	Capital Advanced	Number	Amount
1974-75 .....	853	\$'000 12 000	16 909	\$'000 91 042
1975-76 .....	745	10 490	16 778	95 398
1976-77 .....	597	9 384	16 582	97 752
1977-78 .....	582	9 769	16 456	100 444
1978-79 .....	559	7 992	16 131	101 463

#### HOUSING LOANS INSURANCE CORPORATION

The Housing Loans Insurance Corporation was established by the *Housing Loans Insurance Act* 1965 to administer the Commonwealth Government's Housing Loans Insurance Scheme under which approved lenders may be insured against losses arising from the making of housing loans. The Corporation consists of a Chairman (who is also Managing Director) and a Deputy Chairman, who are full-time members, and three part-time members, all of whom are appointed by the Governor-General.

An amendment to the Act in 1977 broadened the scope of the Corporation's activities so that loans for the purchase of vacant land and commercial housing propositions are insurable as well as loans for the purchase or construction of homes for owner occupancy.

Owner occupancy loans are insurable without limit on loan amount, interest rate or term. Loans for the purchase of vacant land are insurable where the borrower intends to

erect his home at a later date. In the commercial field, loans for rental housing ranging from single houses or home units to multi-storey structures together with loans for the purchase and development of land and the building of project housing (including home units) are acceptable.

A once only premium is charged by the Corporation at the time the loan is made. The premium is payable by the borrower but lenders may agree to add it to the amount of the loan for repayment by the borrower over the period of the loan. With owner occupancy loans comprising 94 per cent and 95 per cent of the valuation of a home the premium is 1·4 per cent of the amount of the loan. Loans from 95 per cent to 100 per cent of valuation carry a loading of 10 per cent on the maximum 1·4 per cent rate. On loans less than 94 per cent of valuation, the premium falls progressively down to 0·25 per cent on loans of less than 76 per cent of valuation except that a concessional premium of 0·1 per cent is applicable where the loan is less than 76 per cent of valuation and relates to an owner occupied home. Premium rates for the purchase of vacant land are the same as for home ownership.

The Corporation will insure a loan made to enable a borrower to buy or build a house, to buy a home unit, or to discharge an existing mortgage. Loans for alterations and extensions and loans to meet expenses of providing or improving lighting, sewerage, drainage, fences, roads, etc. are also insurable. In addition to loans secured by a registered first mortgage, there is provision for the insurance of second mortgage loans and cover is available for amortised, fixed term or five-year loans.

#### Further References

Additional information may be found in the following publications:

##### South Australian Office

8701.4     *Building Statistics: Building Approvals*  
8703.4     *Building Statistics*

##### Central Office

8702.0     *Building Approvals, Australia*  
8704.0     *Building Operations, Australia*  
8705.0     *Building Statistics*

## **PART 9**

# **PRODUCTION**

### **9.1 RURAL INDUSTRIES**

South Australia has a semi-arid Mediterranean type climate with mild and humid winters and hot and dry summers. Cereal production and livestock are the main components of agriculture.

The State can be divided into three main zones based on rainfall. The dry inland area is known as the pastoral zone with the main activity being low intensity grazing of livestock. In the cereal zone of intermediate rainfall, major production is of cereal and livestock products. The higher southern rainfall zone has a more reliable growing season and farming is based on higher intensity grazing of sheep and cattle. Areas adjacent to the River Murray are devoted mainly to horticulture and viticulture.

#### **RURAL INDUSTRY ORGANISATIONS**

The South Australian Department of Agriculture provides advisory, regulatory and research services to all farming industries in this State. These services are complemented by educational and research organisations (see Part 6.2 Education and Part 6.3 Scientific and Research Organisations) and private firms which also provide expertise in the field of agriculture. Other organisations, many established by State or Commonwealth legislation, also influence the State's rural industries. The following table gives details on some of these bodies.

### Rural Industry Organisations and Major Activities, South Australia

Organisation	Activities
Australian Wheat Board	Sole authority for receival and marketing of wheat.
Australian Barley Board	Provides a marketing system for barley and oats.
South Australian Co-operative Bulk Handling Ltd	Bulk handles all wheat, barley and oats in South Australia.
Australian Wool Corporation	Controls marketing of wool in Australia and overseas.
Australian Meat and Livestock Corporation	Promotes the sale of meat and livestock in Australia and overseas.
South Australian Potato Board	Regulate marketing and pricing of their respective products.
Dried Fruits Board	
Citrus Industry Organisation Committee of SA	
South Australian Egg Board	Regulate production and marketing of their respective products in the Adelaide metropolitan area.
Metropolitan Milk Board	
South Australian Meat Corporation	

### RURAL INDUSTRY ASSISTANCE

Details of financial assistance provided to the rural sector by the State Government are given in Part 4.2 Land Settlement Schemes.

### RURAL STATISTICS

Most rural statistics are prepared from the annual Agricultural Census in which returns are collected from rural establishments. Particulars relate to rural operations for one complete year ended 31 March, but where harvesting of some crops (mainly fruit) has not been completed by that date, growers are asked to estimate production. An owner or occupier who works more than one rural establishment is normally required to report details for each. However, where they are near to one another and are in effect worked as one, a composite return is obtained, and is treated as covering a single rural establishment in the district in which the main farm is situated.

Since 1976-77, statistics have been compiled from Agricultural Census returns from rural establishments where the legal entities operating those establishments have estimated values of operations from agricultural activity of \$1 500 or more.

This criterion has resulted in the exclusion of a significant number of small rural establishments and for this reason it is not strictly valid to compare data before 1976-77 with later years. However, the exclusion of small holdings does not have a great effect on statistics of total agricultural production.

The number and area of rural establishments in each statistical division for the past two years are shown in the following table.

**Rural Establishments: Statistical Divisions, South Australia**

Statistical Division	Establishments		Area of Establishments	
	1977-78	1978-79	1977-78	1978-79
Adelaide .....	2 058	2 006	66	66
Outer Adelaide .....	4 501	4 585	930	937
Yorke and Lower North .....	3 172	3 148	1 891	1 884
Murray Lands .....	4 867	4 831	3 720	3 729
South East .....	3 460	3 423	1 801	1 812
Eyre .....	2 131	2 113	5 374	5 385
Northern .....	1 720	1 711	48 712	48 842
Total .....	21 909 (a)	22 022	62 494	62 655

(a) Beekeepers without a fixed land-base are included in the total but not allocated to any specific Statistical Division.

**Integrated Agricultural Register**

In 1975 additional information was sought to assess structural details of the agricultural industry in Australia to enable compatibility and comparisons with other industries through financial data. Resulting from this need was the formulation of the Integrated Agricultural Register (IAR) which is used to compile details of the structure of economic units engaged in agriculture.

The economic units defined in the IAR are similar to those used for other industries, namely the enterprise and the establishment. The identification of these units within the agricultural sector has allowed the production of more meaningful statistics of economic size, legal status and industry classification. It has also provided some insight into the activities of agricultural enterprises in other sectors of the economy and the activities of non-agricultural enterprises in the agricultural sector.

The enterprise is that unit comprising all operations in Australia of a single operating legal entity. An agricultural enterprise is an enterprise mainly engaged in agricultural activities. The estimated value of operations of these enterprises includes the estimated value of non-agricultural operations.

The establishment is the smallest economic unit in the system, covering all operations carried out by one enterprise at a single physical location. For the agricultural sector a physical location has been interpreted to mean each individual agricultural holding. However, where two or more holdings in the one State are operated under one management and one set of accounts, the holdings are combined to form one establishment. An agricultural establishment is an establishment which is engaged mainly in agricultural activities. The estimated value of operations of these establishments includes the estimated value of non-agricultural operations.

The following table shows the number of agricultural enterprises in South Australia cross-classified by industry and estimated value of operations. Further details are contained in the publication *Agricultural Sector, Part 1—Structure of Operating Units* (Catalogue No. 7102.0) published by the Australian Statistician.

**Agricultural Enterprises: Industry and Estimated Value of Operations  
South Australia 1977-78**

Industry of Enterprise	Estimated Value of Operations (\$'000)					Total Enterprises
	2-19	20-49	50-99	100-199	200 and more	
Cereal grains .....	589	754	248	28	5	1 624
Oilseeds n.e.c. ....	22	21	8	4	1	56
Sheep—Cereal grains .....	1 635	2 949	829	85	11	5 509
Meat cattle—Cereal grains .....	95	69	28	10	—	202
Sheep—Meat cattle .....	483	565	209	54	25	1 336
Sheep .....	1 149	869	298	72	16	2 404
Meat cattle .....	887	149	52	21	14	1 123
Milk cattle .....	905	550	63	8	1	1 527
Pigs .....	209	160	63	12	6	450
Poultry for meat .....	16	24	6	3	2	51
Poultry for eggs .....	44	38	33	26	16	157
Grapes .....	1 235	406	37	5	1	1 684
Orchard and other fruit .....	770	579	162	42	12	1 565
Vegetables—potatoes .....	51	53	30	23	4	161
Vegetables—other .....	558	263	76	31	25	953
Multi-purpose farming .....	13	15	5	2	—	35
Nurseries and specialised horticultural activities (except forest nurseries) .....	17	34	19	9	4	83
Agriculture n.e.c. ....	257	26	18	10	5	316
Total .....	8 935	7 524	2 184	445	148	19 236

**Agricultural Finance Survey**

Estimates of the financial performance of the rural sector of the economy are derived from information obtained in the Agricultural Finance Survey. Before 1977-78 this was an annual collection, but is currently a triennial collection which samples a representative cross-section of all agricultural enterprises in Australia.

Since 1976-77 the Agricultural Finance Survey has been conducted using a single (field) phase sample of approximately 3 500 enterprises throughout Australia, the interviews with selected businesses being carried out by trained Bureau field agents over a six-month enumeration period.

**Financial Estimates of Agricultural Enterprises: South Australia, 1976-77 and 1977-78**

Items	1976-77		1977-78	
	\$m	SE%	\$m	SE%
Sales from crops .....	258.8	4	187.0	5
Sales from livestock .....	150.9	5	156.0	5
Sales from livestock products .....	175.6	5	170.4	4
Turnover .....	607.9	2	530.3	3
Purchases and selected expenses .....	259.7	3	266.9	3
Value added .....	327.8	4	234.7	6
Adjusted value added .....	293.6	4	198.8	6
Gross operating surplus .....	245.5	5	142.6	9
Cash operating surplus .....	246.2	4	149.0	8
Total net capital expenditure .....	80.2	8	69.0	9
Gross indebtedness .....	306.0	9	323.5	8

The table above contains estimates of selected financial aggregates of South Australian agricultural enterprises for the years 1976-77 and 1977-78; the associated standard error (SE) for each estimate is also given, being a measure of the sampling error

resulting from the use of sampling techniques as opposed to undertaking a complete census. More detailed information both on the statistics shown and the terms used are contained in the publication *Agricultural Sector, Part IV—Financial Statistics* (Catalogue No. 7507.0) published by the Australian Statistician.

Caution should be exercised when making comparisons between estimates derived from the Agricultural Finance Survey and those compiled annually by the Bureau in its Value of Agricultural Production series. Some of the major reasons for differences between the estimates are as follows:

- (1) to enable a comparison to be made with statistics produced for other sectors of the economy, the Survey is conducted on an integrated basis which excludes from the survey enterprises which undertake some agricultural activity but their predominant activity is non-agricultural;
- (2) the Value of Agricultural Production estimates measure the income accruing from production for a particular year irrespective of whether the total production has been marketed or not. The Survey on the other hand operates generally on a cash basis recognising income only when payment has been received;
- (3) the Survey includes only the value for crops sold, whereas the Value of Agricultural Production estimates include the value of crops and seed produced and consumed on the farm.

#### LAND UTILISATION

Most of the land area of South Australia is arid or semi-arid and cannot be used for crop production. This severe natural limitation means that even with modern farming methods only 6 million of 63 million hectares in rural establishments are devoted to cropping or permanent improved pasture.

As shown in the following table the area under crop in recent years has varied between 2.0 and 3.0 million hectares. Most of this is planted to cereals for the production of grain, hay and forage and about 57 000 hectares are used for the production of fruit and vegetables.

**Land Utilisation of Rural Establishments, South Australia**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
'000 hectares					
Area used for:					
Crops (a) .....	2 257	2 116	2 036	2 565	2 827
Sown pastures;					
Lucerne .....	196	174	140	107	77
Lucerne based .....	641	679	689	640	558
Clovers, grasses and medics ....	2 804	2 736	2 655	2 502	2 641
Balance of holdings (b) .....	57 928	57 873	57 531	56 680	56 552
Total area of holdings .....	63 825	63 577	63 052	62 494	62 655

(a) Excludes duplication on account of area double cropped. Excludes pastures harvested for hay and seed which have been included in 'Area used for sown pastures'.

(b) Used for grazing, lying idle, etc.

The cereals—wheat, barley and oats—sown for grain account for about 90 per cent of the total area cropped in South Australia. In addition to hay and green forage the

remainder of the area is devoted mainly to orchards, vineyards and vegetable production. Climatic conditions, particularly the relatively low winter rainfall and the dry hot summer, favour cereal growing, one advantage being the low incidence of stem rust, a serious disease in the moister areas of the Australian wheat belt.

The area sown to the more important crops during the last five seasons is given in the following table.

**Area Sown to Principal Crops, South Australia**

Crop	1973-74	1974-75	1975-76	1976-77	1977-78
'000 hectares					
<b>Cereals for grain:</b>					
Wheat .....	1 220.4	958.5	839.1	1 090.0	1 295.3
Barley .....	700.7	832.0	855.4	1 073.4	1 091.1
Oats .....	134.9	119.0	116.7	130.0	170.5
Rye .....	10.2	7.8	12.7	23.0	37.7
<b>Crops for hay:</b>					
Oaten .....	35.0	34.4	40.9	41.3	52.5
Other .....	15.9	16.7	20.0	21.6	20.9
<b>Crops for green forage</b> .....					
	59.4	54.8	58.8	74.8	43.4
<b>Vegetables:</b>					
Potatoes .....	2.7	2.8	3.2	3.6	3.6
Tomatoes .....	0.6	0.4	0.4	0.4	0.4
Other .....	6.9	6.2	6.2	4.3	6.0
<b>Fruit:</b>					
Orchards .....	16.6	16.5	15.8	15.7	15.7
Vineyards .....	30.4	31.2	31.2	31.5	31.3
Other crops .....	23.6	35.3	36.0	55.0	58.4
<b>Total area of crops</b> .....	<b>2 257.2</b>	<b>2 115.7</b>	<b>2 036.5</b>	<b>2 564.6</b>	<b>2 826.7</b>

### IRRIGATED CULTURE

The following table shows the area of all irrigated culture in South Australia for the seasons 1972-73 to 1978-79. Of the areas shown below, about 55 per cent of both orchards and vineyards and about 15 per cent of pastures are in the River Murray irrigation areas listed in the table on page 386.

**Area Under Irrigated Culture, South Australia**

Season	Orchards	Vineyards	Vegetables	Other Crops	Pasture	Total
Hectares						
1972-73 .....	13 126	17 160	6 248	2 028	44 586	83 148
1973-74 .....	13 211	16 973	5 599	1 434	42 960	80 177
1974-75 .....	13 263	17 987	5 888	2 396	39 414	78 948
1975-76 .....	13 132	18 387	5 601	2 205	38 569	77 894
1978-79(a) .....	12 338	18 892	6 409	4 571	36 176	78 386

(a) Irrigation details now collected triennially.

The most important irrigation areas are those located in the Murray Valley. A description of the development and types of irrigation schemes along the River Murray is given in Part 8.2.

**River Murray Irrigation Areas: Area of Pasture and Area and Production of Vineyards and Orchards, 1978-79<sup>(a)</sup>**

Irrigation Area	Pasture (b)	Area			Production			
		Vineyards		Orchards	Vineyards		Orchards	
		Bearing	Not Bearing		Total Grapes Produced	Grapes used for Wine	Oranges	Nectarines and Peaches
Hectares								
Upper Murray:							Tonnes	
Berri .....	59	2 025	83	1 070	28 086	22 863	9 923	1 757
Cadell .....	—	115	14	163	1 340	1 141	1 423	97
Cobdogla .....	29	545	16	18	10 444	9 505	66	n.a.
Cooltong .....	51	184	4	275	3 616	3 436	4 836	142
Holder .....	—	117	17	109	2 246	2 189	1 723	11
Loveday .....	22	867	18	101	15 363	13 311	1 210	n.a.
Loxton .....	—	1 531	46	1 115	28 338	26 359	26 610	768
Moorook .....	n.a.	181	9	174	2 588	2 318	2 327	49
Nookamka .....	—	683	23	52	11 533	10 271	616	13
Ral Ral .....	64	314	12	113	3 523	2 731	122	591
Remark .....	66	2 053	97	1 374	24 458	20 695	11 204	5 120
Sunlands .....	—	38	n.a.	527	845	845	18 390	23
Waikerie .....	n.a.	659	33	838	11 098	10 673	13 393	1 234
Other .....	110	360	n.a.	852	4 935	4 311	15 382	1 254
Total .....	421	9 672	404	6 781	148 413	130 648	107 225	11 066
Lower Murray:								
Cowirra .....	208	—	—	—	—	—	—	—
Jervois .....	2 120	—	—	—	—	—	—	—
Montielth .....	501	—	—	—	—	—	—	—
Mypolonga .....	686	—	—	375	—	—	6 610	275
Neeta .....	375	—	—	—	—	—	—	—
Pompoota .....	495	—	—	—	—	—	—	—
Other .....	730	—	—	—	—	—	—	—
Total .....	5 115	—	—	375	—	—	6 610	275

(a) Excludes areas and yields of crops grown by irrigation on the River Murray and elsewhere not in the above irrigation areas. (b) Includes non-irrigated pastures.

The main crops in the Upper Murray irrigation areas are grapes, citrus fruit and stone fruit while the reclaimed swamp areas of the Lower Murray irrigation areas are used mainly for pastures.

### FERTILISERS

**Principal Crops and Pasture Fertilised, South Australia, 1978**

Type of Crop	Area Fertilised '000 hectares	Fertiliser Used			
		Super-phosphate	Other	Total	Per Hectare
Tonnes					
Wheat .....	1 233	136 468	8 011	144 479	117.17
Barley and oats .....	1 257	149 180	13 175	162 355	129.13
Vegetables .....	8	4 515	8 128	12 643	1 683.49
Fruit trees and vines .....	26	7 737	10 074	17 811	673.94
Other and unspecified crops .....	71	9 750	1 165	10 915	152.90
Total crops .....	2 596	307 650	40 553	348 203	134.15
Pasture .....	1 614	198 640	8 165	206 805	128.14
Total .....	4 210	506 290	48 718	555 008	131.85

Nearly all soils in the agricultural areas of South Australia are deficient in phosphoric acid, and superphosphate is used on both crops and pastures in large quantities to overcome this deficiency. In some areas trace elements (manganese, copper, zinc and molybdenum) are added to the superphosphate to rectify the chronic shortage of these elements.

#### Use of Artificial Fertilisers: Statistical Divisions, South Australia, 1978

Statistical Division	Crops			Pastures	
	Area Fertilised	Proportion of Total Area Cropped	Fertiliser Used	Area Fertilised	Fertiliser Used
'000 ha		Per cent	Tonnes	'000 ha	Tonnes
Adelaide .....	12	64.76	8 456	10	1 806
Outer Adelaide .....	132	85.26	22 223	268	38 467
Yorke and Lower North .....	588	94.45	80 753	117	12 536
Murray Lands .....	580	92.40	75 154	208	26 825
South East .....	120	78.62	19 628	854	110 427
Eyre .....	944	94.02	118 437	129	13 917
Northern .....	219	89.19	23 552	27	2 827
Total .....	2 596	91.83	348 203	1 614	206 805

#### Use of Artificial Fertilisers, South Australia

Year	Crops			Pastures	
	Area Fertilised	Proportion of Total Area Cropped	Fertiliser Used	Area Fertilised	Fertiliser Used
'000 ha		Per cent	Tonnes	'000 ha	Tonnes
1974 .....	1 986	87.99	299 438	2 138	322 754
1975 .....	1 821	86.07	267 794	1 133	146 995
1976 .....	1 785	87.65	264 657	1 408	174 937
1977 .....	2 309	90.02	316 552	1 607	204 468
1978 .....	2 569	91.83	348 203	1 614	206 805

### CEREALS

#### WHEAT

Wheat has always been a crop of major importance to the economy of this State. South Australia produced 12 per cent of the Australian wheat production in 1978-79 compared with 6 per cent in 1977-78.

In the past twenty years a feature of the industry has been that average yields have fluctuated about a higher level of average yield mainly because of improved farming practices, including the adoption of nitrogen-building legumes in the rotation. The average yield per hectare for the 1978-79 season was a record 1.61 tonnes, surpassing the previous high of 1.58 tonnes in 1960-61. The record wheat crop was 2 263 000 tonnes in 1968-69. Production in 1978-79 was 2 086 000 tonnes.

#### Wheatgrowing Districts

Wheatgrowing in South Australia is virtually restricted to the belt between the 200 millimetre and 450 millimetre rainfall isohyets for the period April-November inclusive. The principal wheat producing districts are in the Eyre, Yorke and Lower North, Murray Lands and Northern Divisions. These districts accounted for about 95 per cent of the area sown in 1978-79.

**Wheat Sown for Grain: Area and Production, Statistical Divisions, South Australia**

Statistical Division	Area		Production	
	1977-78	1978-79	1977-78	1978-79
	'000 hectares		Tonnes	
Adelaide .....	1	1	1 035	1 988
Outer Adelaide .....	30	37	21 857	68 746
Yorke and Lower North .....	205	231	153 346	418 353
Murray Lands .....	206	254	69 229	295 298
South East .....	22	29	25 568	74 168
Eyre .....	507	601	159 448	957 835
Northern .....	120	142	80 335	269 341
Total .....	1 090	1 295	510 818	2 085 729

**Varieties of Wheat**

In each of the Australian States a committee has been set up to examine and recommend the wheat varieties which should be grown by farmers for marketing through the Australian Wheat Board. The South Australian Advisory Committee on Wheat Quality was established in 1962. Recommendation or approval of wheat varieties is decided each year by the Committee which brings together relevant available information on breeding, testing, commercial production, handling and end usage of wheat and more particularly of specific varieties. The Department of Agriculture and the Australian Wheat Board encourage growers to produce wheat with uniform characteristics in both the Hard class and Australian Standard White (ASW) class and this can be done more successfully if only a few of the best varieties are grown by the farmers.

The leading varieties of wheat sown for all purposes in 1978-79, and for the two previous years are shown in the following table.

**Principal Varieties of Wheat Sown, South Australia**

Variety	Area			Proportion of Total Area		
	1976-77	1977-78	1978-79	1976-77	1977-78	1978-79
	'000 hectares			Per cent		
Condor .....	81	134	169	9.5	12.1	12.9
Dirk .....	23	25	25	2.7	2.2	1.9
Eagle .....	113	91	77	13.3	8.2	5.9
Egret .....	12	23	28	1.4	2.0	2.2
Festiguay .....	56	73	88	6.5	6.6	6.7
Halberd .....	310	427	514	36.3	38.4	39.3
Kite .....	78	114	143	9.2	10.3	11.0
Oxley .....	1	12	40	0.2	1.0	3.0
Sabre .....	12	24	31	1.4	2.2	2.3
Other .....	167	189	193	19.6	17.0	14.8
Total area .....	853	1 111	1 308	100.0	100.0	100.0

The Advisory Committee has divided the State into seven wheat growing zones and each year recommends to farmers those wheat varieties which are likely to give the best results as far as the protein content of the wheat is concerned, while maintaining a high

rate of yield. For 1978-79, Halberd was the main variety recommended for ASW wheat and Condor was the most widely grown of the hard wheats.

### Marketing

#### Australian Wheat Board

The Board has legislative powers over the receival and disposal of all wheat and wheat products. Under the stabilisation plan the Board is the sole authority for marketing wheat in Australia and for marketing wheat and flour for export.

In its first full season, 1939-40, the Wheat Board received 5.3 million tonnes. Deliveries to the Board in 1978-79 totalled 17.4 million tonnes, a new record. The previous record delivery of 14 million tonnes was made during 1968-69.

**Deliveries to the Australian Wheat Board<sup>(a)</sup>**

Season	South Australia	Australia	Season	South Australia	Australia
'000 tonnes					
1969-70 .....	1 517	9 755	1974-75 .....	1 377	10 704
1970-71 .....	681	6 936	1975-76 .....	1 042	11 247
1971-72 .....	1 306	7 665	1976-77 .....	725	10 932
1972-73 .....	711	5 438	1977-78 .....	416	8 542
1973-74 .....	1 672	11 199	1978-79 .....	1 976	17 448

(a) Mostly in bulk, but includes weight of bags where used.

During the year ended 30 November 1979 total exports of wheat (including wheat equivalent of flour and wheat products) were 8.8 million tonnes.

### Bulk Handling

The South Australian Co-operative Bulk Handling Ltd, which was incorporated on 7 December 1954, is the sole bulk grain handling authority in this State, and is owned, financed and controlled by the growers.

The bulk handling operations of the State have been divided into seven divisions—Ardrossan, Port Giles, Wallaroo, Thevenard, Port Lincoln, Port Pirie and Port Adelaide—each of which provides a terminal port as a shipping outlet for the country silos within the division. The following table shows the total bulk capacity, expressed in tonnes of wheat, of the respective divisions.

**Bulk Handling Capacity, South Australia, 31 December 1979<sup>(a)</sup>**

Division	Permanent	Temporary	Total
'000 tonnes			
Ardrossan .....	257.2	—	257.2
Port Adelaide .....	1 013.0	64.6	1 077.6
Port Giles .....	168.0	—	168.0
Port Lincoln .....	898.5	95.4	993.9
Port Pirie .....	419.3	75.9	495.2
Thevenard .....	381.6	75.3	456.9
Wallaroo .....	440.6	—	440.6
Total .....	3 578.2	311.2	3 889.4

(a) Includes current contracts let.

The system by which payments are made to growers changed from the 1975-76 season. Previously growers forwarded claim forms through the bulk handling authority, after the delivery of wheat. Now a claim form containing the pre-harvest information required by the Board is forwarded by each grower. The form enables the prompt payment of the first advance, on a fortnightly basis after 1 December throughout the harvest period, by directly crediting the net payments to growers' individual bank accounts.

Under the system of pooling wheat, the cost of handling wheat by the Co-operative is reimbursed by the Wheat Board.

#### Grading of Wheat

To aid the Wheat Board in the marketing of wheat each season, a separate standard sample is determined for the various classes of exportable wheat produced in each State. Samples of the various classes of wheat are then packed in sealed bags and forwarded by the Wheat Board to the potential purchasers of Australian wheat.

In South Australia, the classes of wheat for which official standards are declared each season are South Australian Hard and Australian Standard White (SA). An official standard sample will also be determined for the class known as General Purpose in seasons when sufficient is available for export.

Test weights of the standard samples for the three classes of wheat segregated in season 1978-79 were declared as follows:

Class of Wheat	Kilograms per Hectolitre
ASW .....	82.0
Hard .....	82.2
General Purpose .....	n.a.

The segregation of South Australian wheat into classes was first introduced in the 1957-58 season when wheat was separated into a Semi-hard wheat class (after 1966 called Hard wheat) and into what, up to that time, was the long established FAQ (Fair Average Quality) class. This has been done in each season since 1957-58.

#### Prices

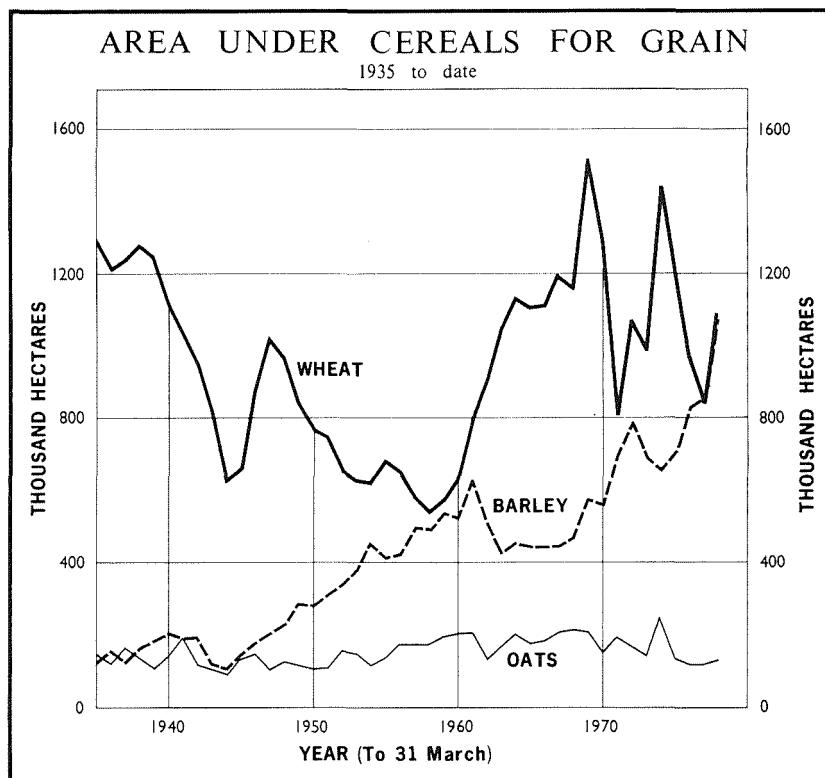
The following table shows the trend in export and domestic prices of Australian wheat for the years 1974-75 to 1978-79. The export prices shown in the table are the basic selling prices for ASW bulk wheat f.o.b., terminal ports.

Export and Domestic Prices of Australian Wheat

Year	Export Price per Tonne (a)	Home Price per Tonne
1974-75 .....	\$ 116.52	\$ 83.40
1975-76 .....	106.39	
From 1/12/75 .....	..	98.70
From 4/5/76 .....	..	99.32
1976-77 .....	96.79	105.40
1977-78 .....	116.48	111.16
1978-79 .....	137.62	116.61

(a) Based on the average of the daily quoted price, year ended November.

The following graph illustrates variations in areas sown to the major cereal crops in South Australia since 1935.



### BARLEY

#### Production

In 1978-79 the area sown to barley for grain in South Australia represented 39 per cent of the Australian total and yielded 36 per cent of the grain produced. Of the area sown for grain in South Australia, 98 per cent was 2-row barley, reflecting the suitability of certain areas of the State for the production of high quality malting barley. For malting purposes a plump mellow grain with fine skin coverings is required, and this can best be obtained when the ripening period is somewhat prolonged by cool conditions, without high temperature or drying winds.

Total area sown to barley in 1978-79 was 1 108 000 hectares, 1 091 000 hectares being sown for grain. Production in 1978-79 was a record 1 423 000 tonnes. The previous highest production of 1 134 000 tonnes was achieved in 1974-75.

**Area and Production of Barley for Grain: Statistical Divisions, South Australia**

Statistical Division	Area		Production	
	1977-78	1978-79	1977-78	1978-79
	'000 hectares		'000 tonnes	
Adelaide .....	4	4	5	6
Outer Adelaide .....	59	61	45	90
Yorke and Lower North .....	323	328	237	500
Murray Lands .....	264	265	96	221
South East .....	39	44	33	61
Eyre .....	307	313	130	425
Northern .....	78	76	46	119
Total .....	1 073	1 091	592	1 423

Unlike wheat, barley growing has nearly always been confined to very suitable districts resulting in high and remarkably stable yields, the record yield being 1.62 tonnes per hectare in 1974-75.

Yorke Peninsula is the major barley-producing district in South Australia. In the 1978-79 season this area contributed approximately 23 per cent of the total crop. It has an ideal climate for barley growing as the moisture-laden breezes off the gulfs on either side retard ripening.

**Varieties**

The most widely grown barley variety before 1970-71 was Prior, which for the three seasons ended 1969-70 averaged about 60 per cent of the total area sown. Another variety, known as Noyep, is similar to Prior but is earlier maturing and is suitable to areas where a sudden cut-off in spring rainfall is experienced.

The malting variety, Clipper, was released in South Australia to replace Prior in 1968. Reported area sown to Clipper in the 1970-71 season was 330 000 hectares, in the 1971-72 season 512 000 hectares and in the 1978-79 season 666 000 hectares. The variety has greater straw strength, is much less subject to wind damage, is adapted to conditions of high soil fertility and in tests produced substantially higher yields than Prior. These features together with improved malting quality represent considerable advantages for the grower and the industry as a whole. In 1978-79 Clipper was the most widely grown variety, accounting for 60 per cent of the total area sown to barley. The percentage sown to Prior and Noyep was 3 and 1 per cent respectively. Another variety, Ketch, was released in 1970. The proportion sown to Ketch in 1978-79 was approximately 4 per cent.

**Marketing**

The marketing of barley is under the control of the Australian Barley Board which operates in South Australia and Victoria and provides an orderly marketing system for barley grown in these States. In the 1978-79 season the Board received a record total of 1 808 000 tonnes, the previous record was 1 420 000 tonnes in 1975-76. Since 1966-67 receivals of bulk barley have been greater than receivals of bagged barley.

For marketing purposes all barley is classified on sample before delivery. Classification is firstly by row variety and secondly by quality. With the wide acceptance of Clipper barley as the prime malting variety, the Board renumbered its barley standards for South Australia for season 1975-76 and subsequent seasons to South Australian Clipper Barley Nos. 1 and 2 Grade, South Australian Two Row Barley Nos. 3 and 4 Grade, and South Australian Six Row Barley Feed Grade.

## Australian Barley Board Receivals, South Australia

Season	2-Row				6-Row	
	No. 1 Grade	No. 2 Grade	No. 3 Grade	No. 4 Grade	Feed	Total
'000 tonnes						
1975-76 .....	116	270	603	6	10	1 006
1976-77 .....	82	213	502	9	5	812
1977-78 .....	10	67	398	8	1	484
1978-79 .....	117	325	861	28	9	1 340

The price of malting barley is determined on the basis of an agreed formula and subsequently the prices of barley for distilling and pearl barley are calculated—the prices for feed purposes are determined monthly. The home consumption prices determined by the Board for barley for the seasons 1976-77 to 1978-79 are shown below.

## Price per Tonne of Barley for Home Consumption

Season	No. 1 Grade	No. 2 Grade	No. 3 Grade	No. 4 Grade
Bagged Barley				
Dollars				
1976-77:				
3 year Contract .....	—	—	96.90	95.00
Other .....	108.40	105.40	102.00	100.00
1977-78:				
3 year Contract .....	—	—	96.90	95.00
Other .....	114.00	111.00	102.00	100.00
1978-79:				
3 year Contract .....	—	—	85.50	83.60
Other .....	116.50	113.50	90.00	88.00

## OATS

The following table shows details of oats sown in recent years.

## Oats, South Australia

Season	Area Sown for			Total Area	Production	
	Grain	Hay	Forage		Grain	Hay
'000 hectares						
1974-75 .....	135	35	45	215	112	117
1975-76 .....	119	34	41	195	107	99
1976-77 .....	117	41	40	198	90	114
1977-78 .....	130	41	41	212	55	75
1978-79 .....	171	52	29	252	177	163

The milling qualities of most oats grown in South Australia do not meet the requirements of overseas markets and only a small proportion of the harvest is exported; most

of the crop is used as animal fodder. As is the case with barley, some of the area sown for grain and hay is grazed until June or July then closed to sheep to allow re-growth to a crop. Part of the area sown for forage is left to stand until it is used as dry grazing in autumn, when other fodder is not plentiful.

In 1978-79, 76 per cent of the total area of oats was sown in four varieties—Swan, 131 000 hectares; Avon, 32 000 hectares; West, 17 000 hectares; and Kherson, 13 000 hectares.

### RYE

Rye is a minor crop, but it has been used to control sand drift and particularly to stabilise the light soils of the Murray Mallee. Because the sands are deficient in two main nutrients (nitrogen and phosphorus), a mixed superphosphate-ammonia fertiliser is sown with the rye seed early in the season. The rapid early growth of the rye while the ground is still warm and before the strong winds of winter cause sandblast is at present the most effective form of controlling drifting sand. Rye provides early greenfeed while some grain is produced on a number of farms. Although most grain is used for stock feed, varying quantities are exported in different years for milling. Rye hay is of poor nutritional quality and only a few hundred tonnes are produced each year.

In 1978-79, 38 000 hectares of rye for grain yielded a record 17 000 tonnes. The previous record production was 12 000 tonnes from 23 000 hectares in 1958-59.

### HAY

The quantity of hay produced varies considerably from year to year according to seasonal conditions and the need to replace stocks used during the previous season. The main crops cut for hay in recent years have been oats, lucerne, and clover and grass hay which together account for more than half of all hay produced.

**Hay: Area and Production, South Australia**

Season	Oaten	Wheaten	Lucerne	Barley and Rye	Clover and Grass	Total
AREA ('000 hectares)						
1974-75 .....	35	10	28	6	111	190
1975-76 .....	34	10	25	7	83	159
1976-77 .....	41	11	25	9	79	164
1977-78 .....	41	12	20	10	55	138
1978-79 .....	52	11	16	9	131	219
PRODUCTION ('000 tonnes)						
1974-75 .....	117	34	119	17	375	662
1975-76 .....	99	30	101	16	260	506
1976-77 .....	114	27	99	20	252	512
1977-78 .....	75	20	70	15	146	326
1978-79 .....	163	34	67	22	380	666

Between 20 000 and 50 000 tonnes of silage are produced in most years and in certain areas this is an important supplementary stock food; in 1978-79 production was 17 000 tonnes.

## OILSEEDS

In recent years there has been a significant increase in the area sown to oilseeds. These have proved an alternative to wheat, wool and meat production and are mainly grown under contract to processors and stockfeed manufacturers. The seed is crushed to yield oils which have both domestic and industrial applications and the high protein meal by-product is used for the manufacture of stockfeeds. Details of area and production of selected oilseeds since 1974-75 are shown in the following table.

Selected Oilseed Crops: Area and Production, South Australia

Season	Linseed	Rapeseed	Safflower	Sunflower
AREA (Hectares)				
1974-75 .....	3 165	1 238	363	2 417
1975-76 .....	1 868	3 567	880	3 966
1976-77 .....	2 613	3 767	528	4 426
1977-78 .....	3 759	9 794	893	9 501
1978-79 .....	1 079	11 655	1 084	11 206
PRODUCTION (Tonnes)				
1974-75 .....	3 162	1 781	279	2 576
1975-76 .....	1 608	4 093	583	3 853
1976-77 .....	3 202	5 425	302	4 357
1977-78 .....	2 221	9 895	783	9 499
1978-79 .....	1 174	13 825	922	9 814

## VEGETABLES

The market garden industry in South Australia is characterised by a large number of growers, most of whom cultivate only a few hectares. Many of the gardens form part of a larger holding. Much of the production of the industry comes from properties with easy access to the Adelaide market.

Of the total area of approximately 10 000 hectares devoted to market gardens, districts adjacent to Adelaide account for 4 500 hectares producing all types of vegetables, including large quantities of celery and early tomatoes for export. Over 3 000 hectares are cultivated in the South East Division, mainly peas, sweet corn and potatoes. An area of some 150 hectares in Northern Division (mainly on the coastal plains near Port Pirie) is used for the production of peas, potatoes and early tomatoes for Adelaide and for export to the Melbourne market. Approximately 1 600 hectares along the River Murray are devoted to production of potatoes, pumpkins and melons for the Adelaide market, tomatoes for local markets and small areas of most other vegetables.

The bulk of the potato production comes from the central and southern Adelaide Hills and from the Mount Gambier area. The average yield has risen progressively and reached a record of 26 tonnes per hectare in 1976-77; in 1978-79, average yield decreased slightly to 25 tonnes per hectare. The improvement is largely because of better quality seed, improved fertilisers and advances in pest and disease control.

In 1978-79, 2 174 hectares were sown to green peas in the South East Division for factory processing. Production of green peas from this area accounted for about 99.8 per cent of the total crop. The Port Pirie-Mambray Creek area, the hills to the south of Adelaide and Upper Murray irrigation areas are other important areas for pea production.

The Adelaide plains produce most of the South Australian tomatoes which are grown in glasshouses. Significant quantities, mostly for canning and juice production in local

factories, are now grown in the Upper Murray irrigation areas. In recent years, high yields have resulted from the introduction of new varieties.

#### Vegetables for Human Consumption, South Australia

Vegetable	Area		Production	
	1977-78	1978-79	1977-78	1978-79
Hectares		Tonnes		
Beans .....	32	29	162	161
Cabbages .....	226	242	8 907	8 554
Carrots .....	396	373	12 016	10 998
Cauliflowers .....	253	286	10 868	12 230
Celery .....	72	85	4 901	4 886
Lettuce .....	228	244	3 996	3 905
Melons .....	136	161	1 866	1 905
Onions .....	805	881	24 864	27 377
Peas .....	975	2 296	4 658	11 758
Potatoes .....	3 613	3 582	90 309	89 399
Pumpkins .....	404	415	6 368	5 995
Sweet corn .....	400	631	4 229	8 058
Tomatoes .....	391	432	15 611	16 015
Turnips .....	91	72	1 039	915
Other .....	303	292	..	..
Total .....	8 324	10 021	..	..

#### GRAPES

Approximately 45 per cent of Australia's vineyard area is located in South Australia where the bulk of the grapes are used for winemaking. In 1978-79 South Australia produced 202 million litres of wine and 4 612 tonnes of dried vine fruit representing 58.2 per cent and 8.1 per cent respectively of total Australian production. The following table shows the area and production of vineyards in South Australia for the seasons 1974-75 to 1978-79.

#### Area and Production of Vineyards, South Australia

Season	Vines		Production of Grapes for		
	Bearing Age	Not yet Bearing	Wine	Table	Drying
Hectares		Tonnes			
1974-75 .....	26 833	3 533	272 007	1 388	17 166
1975-76 .....	27 278	3 883	256 583	962	12 183
1976-77 .....	27 858	3 387	280 109	1 440	11 950
1977-78 .....	28 443	3 100	269 449	2 358	24 576
1978-79 .....	28 844	2 433	279 129	2 152	16 922

The area planted to vines at harvest 1979 was 31 277 hectares, 266 hectares below the record area of 31 543 hectares at 31 March 1978. Total production in 1978-79 was a record 298 203 tonnes. The previous record of 296 383 tonnes was achieved in 1977-78.

About one-third of the State's wine-grape crop is received by the co-operative wineries. Nearly all of this is grown by members who receive a down payment on each tonne, followed by further payments over a period of up to five years according to realisation made on the product. The balance of the crop is processed by proprietary wineries which purchase grapes from the growers. Minimum prices, according to variety, are determined by a committee of which the Prices Commissioner is chairman. The proprietary wineries also purchase a large proportion of the wine, brandy and spirits made by co-operatives.

The following table shows the area, production and utilisation of grapes for the seasons 1974-75 to 1978-79.

**Area, Production and Utilisation of Grapes, South Australia**

Season	Area of Vines	Total Grape Production (Fresh)	Wine Production (a)	Dried Fruit Production		
				Currants	Sultanas	Raisins
1974-75 .....	Hectares 30 366	Tonnes 290 561	'000 litres 221 977	2 333	2 054	322
1975-76 .....	31 161	269 728	213 863	1 357	1 639	280
1976-77 .....	31 244	293 489	229 973	2 217	1 011	260
1977-78 .....	31 543	296 383	203 219	1 745	4 243	421
1978-79 .....	31 277	298 203	202 050	1 840	2 350	422

(a) Excludes grape spirit added.

### Grape Growing districts

The grape growing districts of South Australia are subject to substantial variety in geographical location, climatic variations and soil conditions and can be divided into six easily recognisable regions (see map on page 398) ranging from the Clare-Watervale district in the north to the southern limit of the grape growing area at Coonawarra in the south-east of the State and bounded by the warm irrigated areas of the River Murray to the east.

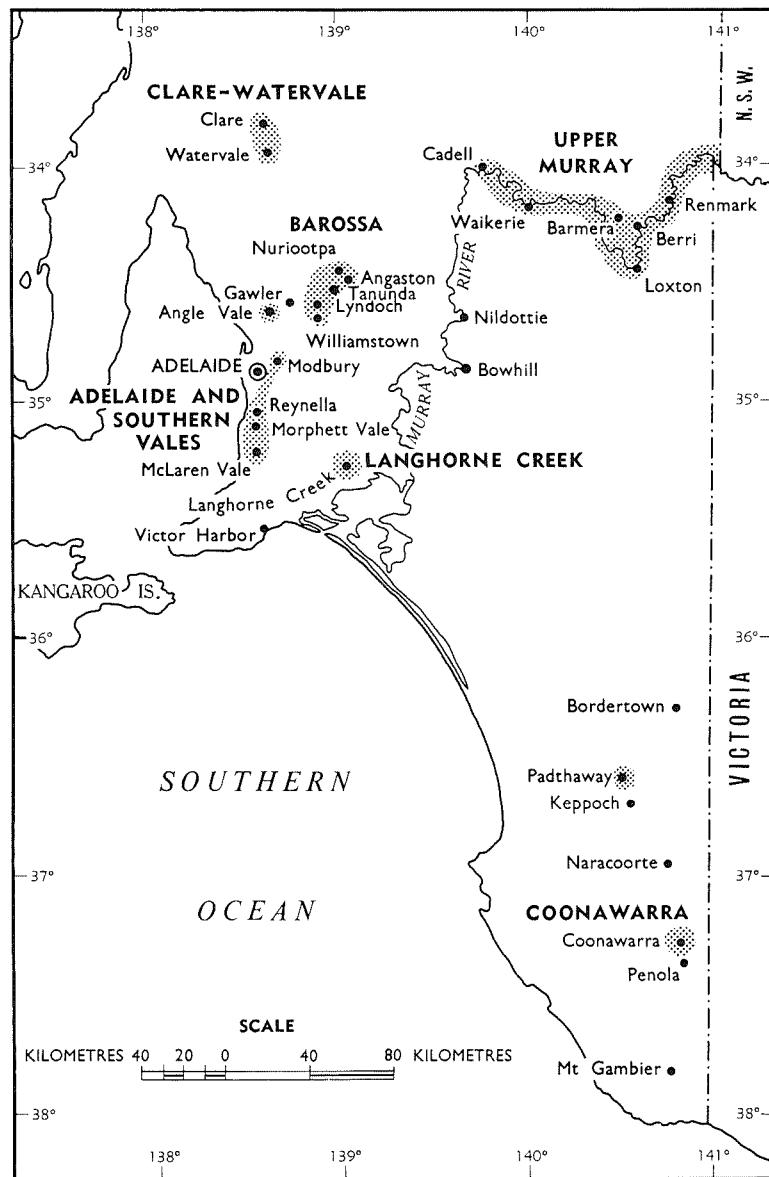
Supplementary irrigation is carried out in some grape growing districts which have not been officially designated as irrigation areas, especially Langhorne Creek and Coonawarra where approximately 50 to 60 per cent of all grapes are under irrigation. The other areas are mainly dependent on winter rainfall stored in the sub-soil by careful dry-farming methods to be used during the summer growing season of the vine—the yields in the non-irrigated districts are more variable than the Upper Murray irrigation areas.

District average yields in the irrigated areas are 18 to 20 tonnes per hectare although individual vineyard yields of 40 to 50 tonnes per hectare are not uncommon. In the non-irrigated districts the average is 4 to 8 tonnes per hectare with individual vineyards producing 20 to 25 tonnes per hectare in favourable years.

### Grape Varieties

The tremendous upsurge in tablewine sales in Australia over the last decade coupled with weakening export markets for dried vine fruits has caused a major shift in the types of grapes grown in South Australia. Areas of Sultana and Waltham Cross, the principal drying varieties have declined overall and the majority of those now grown are used for winemaking rather than for drying. Areas of Muscat Gordo Blanco, which can be used for both drying or winemaking, have remained relatively constant while large areas of specialised wine varieties like Shiraz, Cabernet Sauvignon, Grenache (red wine grapes) and Rhine Riesling (white wine) have been planted in all grape growing districts.

## PORTION OF SOUTH AUSTRALIA GRAPE GROWING DISTRICTS



## Principal Varieties of Vine, South Australia

Variety	March 1976	March 1977	March 1978	March 1979
Hectares				
Cabernet Sauvignon .....	2 413	2 441	2 457	2 417
Clare Riesling .....	(a)	966	990	1 006
Doradillo .....	1 750	1 751	1 731	1 628
Grenache .....	5 264	5 097	4 961	4 727
Mataro .....	1 635	1 597	1 552	1 455
Muscat Gordo Blanco .....	1 897	2 032	2 103	2 136
Palomino .....	2 486	2 410	2 334	2 289
Common Palomino .....				
Pedro Ximenez .....	(a) 3 225	2 565	2 841	3 010
Rhine Riesling .....				
Shiraz .....	5 576	5 546	5 583	5 455
Sultana .....	2 746	2 643	2 638	2 574
Other .....	4 169	4 196	4 353	4 580
Total .....	31 161	31 244	31 543	31 277

(a) Clare Riesling included with Rhine Riesling.

## ORCHARD FRUIT

A wide variety of fruit crops is grown in South Australia. The main types are oranges, peaches and apricots (predominantly grown in the irrigation settlements of the Upper Murray) and apples (nearly all grown in the Adelaide Hills).

The following table of citrus trees of bearing age and production during the past five seasons shows the predominance of navel and valencia oranges. Other types of oranges, lemons and limes, mandarins, grapefruit, etc., together represented only 15 per cent of total citrus production in 1978-79.

## Citrus Fruit: Trees and Production, South Australia

Season	Oranges			Lemons and Limes	Mandarins	Grape- fruit	Total Citrus
	Navel	Valencia	Other	Lemons and Limes			
TREES OF BEARING AGE ('000)							
1974-75 .....	530	795	11	78	67	48	1 527
1975-76 .....	520	797	10	87	68	52	1 534
1976-77 .....	499	781	10	92	63	55	1 500
1977-78 .....	504	783	11	101	62	63	1 524
1978-79 .....	496	785	8	106	63	72	1 531
PRODUCTION (Tonnes)							
1974-75 .....	50 307	75 325	821	7 360	3 371	5 692	142 876
1975-76 .....	54 812	87 778	1 019	7 151	3 619	7 066	161 445
1976-77 .....	49 737	73 872	606	8 100	4 251	8 118	144 684
1977-78 .....	49 961	87 468	881	9 655	4 162	8 155	160 283
1978-79 .....	54 904	85 820	675	10 571	5 189	8 436	165 594

Citrus growing is concentrated in the irrigation settlements of the Upper Murray where approximately 80 per cent of the total crop is produced. The industry has shown great

expansion in the last decade; in 1978-79 a record production of 165 594 tonnes was achieved. The previous record production of 161 445 tonnes was obtained in 1975-76.

Apple growing is the principal non-citrus fruit industry and is concentrated in the Adelaide Hills. A record production of 33 000 tonnes was achieved in 1940-41, while production in 1978-79 was 20 092 tonnes.

Pears are grown in the Adelaide Hills, in the Barossa Valley and on the Murray irrigation settlements. The yield from the 1970-71 harvest was a record 13 000 tonnes from 636 hectares. Production in 1978-79 was 7 120 tonnes.

The stone fruits industry became important following development of the irrigation schemes. Production of peaches has shown the greatest increase: the 1951-52 yield of 3 000 tonnes from 835 hectares was typical for the crop until that time, but by 1966-67 the yield was a record 29 000 tonnes from 1 924 hectares. In the same period production of apricots rose from 11 000 to 28 000 tonnes. South Australia is the major apricot-producing State, with the greater part of the crop being dried and much of the remainder being canned.

Cherries, plums and prunes, and almonds are the most important of the remaining crops.

#### Non-citrus Orchard Fruit: Trees and Production, South Australia

Season	Apples	Apricots	Cherries	Peaches	Pears	Plums and Prunes
TREES OF BEARING AGE ('000)						
1974-75 .....	485	346	45	317	150	60
1975-76 .....	473	332	42	300	145	58
1976-77 .....	453	323	39	274	130	54
1977-78 .....	445	320	41	244	126	58
1978-79 .....	446	318	40	234	120	56
PRODUCTION (Tonnes)						
1974-75 .....	23 181	12 535	779	22 671	11 380	1 392
1975-76 .....	19 302	12 184	741	20 108	9 235	1 879
1976-77 .....	18 315	14 209	693	16 284	6 812	1 485
1977-78 .....	17 085	14 679	1 003	16 624	8 041	1 795
1978-79 .....	20 092	16 499	792	14 536	7 120	1 860

The Upper Murray irrigation areas and the Barossa Valley of South Australia account for almost the entire Australian production of dried apricots, peaches, pears and nectarines. A small proportion of the Australian production of dried prunes is produced in the Barossa Valley and in the Noarlunga district.

#### OTHER CROPS

Other crops cultivated in South Australia include field peas, nursery products, cut flowers, pasture seeds, vegetable seeds and chicory.

In 1978-79, 21 077 hectares of field peas were grown for grain yielding 30 463 tonnes; virtually all of this area is located in the cereal growing districts north of Adelaide. Field peas are grown mainly as a livestock fodder or for processing into split peas.

Most of the lucerne and other pasture seeds are grown in the cooler, moist regions, particularly in the south-east of the State. During the 1978-79 season 70 per cent of the 1 241 000 kg of lucerne seed produced in the State was grown in the South East Division.

A considerable portion of the area devoted to nurseries is found in the vicinity of Adelaide. In addition there are several fruit tree nurseries in the horticultural districts of the River Murray.

### VALUE OF AGRICULTURAL PRODUCTION

The value of agricultural production may be expressed in terms of gross value and local value. Gross value is defined as the value placed on recorded production at wholesale prices realised in principal markets. Where products are absorbed at a local point or become raw material for a secondary industry the value in each case is presumed to be the value of the principal market. Local value equals the gross value of production less marketing costs.

### VALUE AND PRICES OF CROPS

The gross value of crops (including pastures) for South Australia in the 1978-79 season was \$605 875 000.

In the following table gross values of principal crops for the seasons 1974-75 to 1978-79 are shown.

**Gross Value of Principal Crops, South Australia**

Commodity	1974-75	1975-76	1976-77	1977-78	1978-79
\$'000					
Cereals:					
Wheat .....	163 922	118 063	73 726	50 349	263 082
Barley .....	119 305	105 865	93 807	50 553	115 267
Oats .....	7 832	6 485	5 698	4 075	10 380
Rye .....	116	270	566	647	1 240
Crops for hay .....	5 944	5 115	6 015	6 659	10 039
Lupins for grain .....	375	993	915	568	1 213
Rapeseed .....	405	592	963	1 817	2 524
Sunflower .....	578	698	1 188	2 147	2 104
Field peas .....	1 873	1 907	1 488	1 153	3 982
Orchard and berry fruit:					
Citrus .....	14 865	16 806	20 480	26 670	30 470
Apples .....	7 975	5 550	8 892	7 371	9 729
Apricots .....	4 016	4 500	6 776	7 215	8 977
Peaches .....	6 635	4 968	5 128	4 567	4 531
Other .....	6 727	7 378	7 753	9 971	9 619
Vine fruit:					
Wine grapes .....	33 802	35 988	37 593	36 729	40 465
Table grapes .....	654	443	739	1 224	1 739
Dried currants, raisins, etc. ....	3 046	1 768	2 958	6 000	4 688
Vegetables:					
Potatoes .....	9 285	9 966	10 997	10 443	14 669
Tomatoes .....	7 865	10 528	8 540	9 803	9 963
Other .....	18 074	19 641	20 651	26 735	28 200
Other crops .....	5 056	4 881	5 540	8 649	13 318
Total crops (excluding pastures)	418 350	362 405	320 413	273 345	586 199

**Gross Value of Principal Crops, South Australia (*continued*)**

Commodity	1974-75	1975-76	1976-77	1977-78	1978-79p
\$'000					
Pastures:					
Pasture seed .....	5 092	4 066	3 328	3 729	5 364
Pastures cut for hay .....	9 014	6 590	6 657	12 696	14 312
Total pastures .....	14 106	10 657	9 985	16 425	19 676
Gross value of crops .....	432 455	373 062	330 398	289 769	605 875

Market prices of principal crops grown in South Australia for the years 1974-75 to 1978-79 are set out in the following table.

**Prices of Principal Crops, South Australia**

Commodity	1974-75	1975-76	1976-77	1977-78	1978-79p
Dollars per tonne					
Cereals:					
Wheat (a) .....	111.21	104.46	90.36	102.20	127.01
Barley (a) .....	106.11	98.14	106.52	88.37	81.69
Oats .....	74.10	65.20	71.90	88.49	67.32
Rye .....	75.41	100.00	123.17	116.79	74.40
Fruit:					
Apples .....	386.00	310.00	540.00	476.00	539.65
Apricots .....	541.00	411.00	518.00	563.00	612.00
Peaches .....	672.00	637.00	681.00	638.00	867.50
Pears .....	320.00	407.00	460.00	476.00	460.00
Oranges;					
Navel (a) .....	96.91	97.00	146.12	180.47	188.97
Other (a) .....	105.14	105.00	141.92	149.75	179.94
Grapes;					
Table .....	471.00	461.00	513.00	519.00	743.75
Wine (b) .....	124.27	140.26	134.21	136.31	145.18
Vegetables:					
Potatoes (a) .....	131.40	138.95	131.79	115.64	164.24
Onions .....	201.00	253.00	226.00	214.67	235.33
Tomatoes;					
Glasshouse .....	563.00	709.00	615.00	777.00	819.00
Other .....	289.00	569.00	481.00	517.00	373.00

(a) Average price realised.

(b) Weighted average price at winery.

**PASTORAL AND DAIRYING**

Pastoral activities, with sheep grazing predominant, are widespread in South Australia under widely varying climatic conditions from the arid saltbush plains in the Far North through to the lush, well-watered pastures of the South East.

Cattle figures reached their highest peak in 1975 with both sheep and cattle numbers then falling dramatically. By 1978 sheep numbers reached their lowest annual total since 1960; more recently there has been a recovery in both sheep and cattle numbers.

### The Dog Fence

This fence is an unbroken barrier of wire netting about 2 metres high extending for more than 8 000 kilometres through South Australia, along the South Australia-New South Wales and the New South Wales-Queensland borders and through part of Queensland. It has been erected to protect the sheep lands of these States from dingoes (native dogs).

### PASTURES

The Murray Mallee and Eyre Peninsula have been transformed from unstable farming districts to highly productive areas through the sowing of more and improved pastures. In earlier years most pasture plants available flourished only in the higher rainfall zones of the State. At that time Mount Barker subterranean clover was the predominant pasture. New varieties have been introduced, including Clare, Geraldton, Dwalganup and Yarloop subterranean clovers. These are suited to the hard setting soils of the important wheatgrowing area extending northward from Adelaide to Jamestown.

Another type of legume, known as medics, has been found to be suitable for the drier cereal country, especially the mallee soils. Five medics are grown: Hannaford, Jemalong Barrel, Harbinger Strand, Gama Paragosa and Snail. Lucerne is also extensively grown; it thrives under irrigation yet still grows in areas with as little as 250 millimetres of rainfall a year—it is both salt-resistant and drought-resistant. Strawberry clover is the important legume on the black soils of the South East.

The most important perennial grasses in the better rainfall areas are phalaris tuberosa, perennial rye grass and cocksfoot while the annual, wimmera rye grass is most widely used in the medium to low rainfall areas. The naturalised annual grasses which occur over the whole of the State contribute substantially to total pasture production.

#### Area Under Pasture: Statistical Divisions

South Australia<sup>(a)</sup>

Statistical Division	1974-75	1975-76	1976-77	1977-78	1978-79
'000 hectares					
Adelaide .....	24	22	19	15	16
Outer Adelaide .....	406	403	376	368	371
Yorke and Lower North .....	299	275	279	242	262
Murray Lands .....	819	827	813	723	728
South East .....	1 307	1 289	1 263	1 239	1 231
Eyre .....	675	671	638	575	585
Northern .....	111	102	97	88	84
Total .....	3 641	3 589	3 484	3 249	3 276

(a) Lucerne, clovers (all kinds), rye grasses (all kinds), cocksfoot, paspalum, phalaris, primrose, sudan and veldt.

There has been a significant increase in the area of sown pastures over the past twenty years. Area under pasture for the years 1974-75 to 1978-79 is shown for statistical divisions in the table above.

## SHEEP

**Numbers and Distribution**

At 31 March 1970 a record number of 19 747 000 sheep were being maintained in South Australia but recent drought conditions reduced the number to 14 940 000 at 31 March 1979.

The next table shows the total number of sheep in statistical divisions at 31 March for the years 1975 to 1979.

**Sheep Numbers: Statistical Divisions, South Australia  
At 31 March**

Statistical Division	1975	1976	1977	1978	1979
'000					
Adelaide .....	96	108	76	159	60
Outer Adelaide .....	1 958	1 956	1 723	1 676	1 781
Yorke and Lower North .....	2 750	2 580	2 097	1 919	2 146
Murray Lands .....	2 499	2 363	1 994	1 885	2 001
South East .....	4 196	4 281	3 936	3 942	4 135
Eyre .....	2 699	2 606	2 199	1 902	2 050
Northern .....	3 422	3 384	3 108	2 591	2 767
Total .....	17 621	17 279	15 132	14 073	14 940

By far the greatest concentration of sheep is in the South East Division, followed by Northern and Yorke and Lower North Divisions.

The following table shows the age and sex of sheep in South Australia at 31 March from 1975 to 1979.

**Age and Sex of Sheep, South Australia  
At 31 March**

Year	Rams	Breeding Ewes	Other Ewes	Wethers	Lambs and Hoggets (under one year)	Total Sheep
'000						
1975 .....	227	8 648	707	3 820	4 217	17 621
1976 .....	227	8 338	824	3 899	3 991	17 279
1977 .....	214	7 819	648	3 535	2 916	15 132
1978 .....	203	7 407	516	3 133	2 814	14 073
1979 .....	215	7 866	449	3 145	3 265	14 940

**Lambing**

In 1969 a record 8 598 000 ewes were mated and the number of lambs marked totalled 7 193 000. In 1978, 6 942 000 ewes were mated and the number of lambs marked was 5 084 000. Early reports from farmers indicated that they intended to mate 7.7 million

ewes in 1979—approximately 5.1 million to Merino rams, 0.9 million to other longwool rams and 1.7 million to shortwool rams.

Details of lambs marked and the lambing percentage in each statistical division in 1977 and 1978 are given in the next table.

#### Lambing: Statistical Divisions, South Australia

Statistical Division	Lambs Marked		Lambing Percentage (a)	
	1977	1978	1977	1978
'000				
Adelaide .....	26	24	84.02	83.37
Outer Adelaide .....	609	639	76.51	77.78
Yorke and Lower North .....	711	720	67.10	71.14
Murray Lands .....	756	785	68.83	73.09
South East .....	1 480	1 577	80.66	83.15
Eyre .....	524	556	59.65	64.48
Northern .....	702	784	54.13	62.85
Total .....	4 809	5 084	68.73	73.24

(a) Percentage of lambs marked to ewes mated.

#### Breeds of Sheep

The predominant breed in South Australia is the Merino which accounts for more than 87 per cent of the total sheep numbers. The South Australian Merino, having a robust constitution and a capacity to travel long distances to water, has adapted well to the hot, dry conditions of the interior.

#### Breeds of Sheep, South Australia At 31 March

Breed	1969	1970	1971	1974	1977
'000					
Merino .....	15 275.1	16 749.3	16 304.1	14 212.0	13 174.3
Corriedale .....	1 085.3	973.1	940.6	646.2	557.1
Dorset Horn .....	62.0	67.4	77.9	{ 46.5	45.6
Poll Dorset .....	32.3	29.6	27.7	25.8	58.3
Border Leicester .....					
Polwarth .....	114.1	139.6	147.6	137.3	120.0
Romney Marsh .....	26.6	21.1	17.6	11.4	18.4
Ryeland .....	7.1	6.7	5.7	4.0	6.2
Southdown .....	5.3	4.9	4.7	3.1	2.3
Suffolk .....	16.9	14.9	18.4	19.0	23.9
Other .....	4.3	3.8	4.3	7.7	9.6
Merino-Comeback ....	198.8	168.4	214.7	133.6	73.5
Crossbred .....	1 564.3	1 568.3	1 402.6	1 149.3	934.2
Total .....	18 392.1	19 747.1	19 165.8	16 430.9	15 132.3

Of the remaining recognised breeds, the Australasian breeds, Corriedale and Polwarth, are most important. These are dual purpose sheep, used for mutton and at the same time producing wool of good quality. The Corriedale is a fixed cross between

Lincoln rams and Merino ewes while the Polwarth is a fixed comeback breed from the mating of Merino rams with Lincoln-Merino ewes.

British longwools (Border Leicester, Cheviot and Romney Marsh) are used for mating with the Merino or crossbred ewes mainly to produce fat lambs but useful types of comeback and crossbred wools, are also yielded. British shortwools (Dorset Horn, Ryeland, Suffolk, Southdown and Shropshire) are used principally for production of export lambs.

#### **Sheep Shearing and Wool-clip**

In the agricultural areas of the State there is a predominance of shearing during the late winter and spring months, August to November. Shearing in the South East Division occurs somewhat later, with 50 per cent of the wool-clip being obtained in the period October to November. In the northern pastoral areas (Northern Division) there are two main seasons, March-April and July-August. The next table gives details of sheep and lambs shorn, wool-clip and average fleeceweight in South Australia for the years 1974-75 to 1978-79.

**Sheep and Lambs Shorn: Wool-clip and Average Fleeceweight, South Australia**

Classification	1974-75	1975-76	1976-77	1977-78	1978-79
NUMBER SHORN ('000)					
Sheep .....	14 651	15 355	14 645	13 499	12 960
Lambs .....	4 416	4 394	3 275	3 200	3 314
Total .....	19 067	19 748	17 920	16 699	16 273
WOOL-CLIP ('000 kg)					
Sheep .....	88 965	84 148	82 181	73 571	73 319
Lambs .....	8 703	7 663	5 835	5 392	6 011
Crutchings .....	4 594	4 413	4 302	3 925	3 801
Total .....	102 261	96 224	92 317	82 888	83 131
AVERAGE FLEECWEIGHT (kg) (a)					
Sheep .....	6.39	5.77	5.91	5.74	5.95
Sheep and lambs .....	5.36	4.87	5.15	4.96	5.11

(a) Includes crutchings.

The total wool-clip, including crutchings, exceeded 100 million kg for the first time in 1966-67. More than 90 per cent of the total wool is obtained from adult sheep.

The average fleeceweight in South Australia is well over 5 kg a head for adult sheep, with a record 6.39 kg a head being achieved in 1974-75. This is significantly higher than the yield obtained in other States, and is primarily because of the larger size of the South Australian Merino, its broader wool quality and longer thicker-stapled fleece.

A breakdown of the State figures for 1978-79 by statistical divisions is given in the next table. This shows the high average fleeceweight obtained in the northern pastoral areas. The relatively light average fleece obtained in the South East Division is explained partly by the lower proportion of Merino sheep in the area (at 31 March 1977 only 72 per cent of total sheep in the South East Division were Merinos, compared with a total State figure of over 87 per cent), but more importantly by the lighter wool quality of the smaller framed sheep in this area.

**Sheep and Lambs Shorn: Wool-clip and Average Fleeceweight, Statistical Divisions  
South Australia, 1978-79**

Statistical Division	Number Shorn			Wool-clip			Average Fleeceweight(a)	
	Sheep	Lambs	Total	Sheep	Lambs	Total (a)	Sheep	Sheep and Lambs
		'000			'000 kg		kg	
Adelaide .....	232	8	239	708	14	759	3.22	3.17
Outer Adelaide .....	1 595	393	1 988	8 468	659	9 548	5.48	4.80
Yorke and Lower North .....	1 790	440	2 230	10 625	826	11 997	6.24	5.38
Murray Lands .....	1 702	513	2 215	10 206	867	11 614	6.32	5.24
South East .....	3 650	1 012	4 663	20 375	1 905	23 289	5.86	4.99
Eyre .....	1 720	383	2 103	9 550	561	10 627	5.85	5.05
Northern .....	2 271	564	2 835	13 388	1 180	15 298	6.22	5.40
Total .....	12 960	3 314	16 273	73 319	6 011	83 131	5.95	5.11

(a) Includes crutchings.

## WOOL INDUSTRY

### Production of Wool

Total wool production consists of shorn wool (including crutchings) plus fellmongered wool, dead wool and wool exported on skins. Fellmongering is the process of removing wool from the pelt by bacterial action (sweating) or by treatment with chemicals. Dead wool is picked from the carcasses of dead sheep.

From 1965-66 to 1975-76, wool production exceeded 100 million kg each year. In the past 3 years due to seasonal conditions flock numbers have decreased slightly and the total wool production has fallen below this mark. Wool prices have varied markedly resulting in the gross value of production being as low as \$65 million in 1970-71 and as high as \$183 million in 1973-74.

### Wool Production and Value, South Australia

Season	Production			Value of Wool Production
	Shorn Wool	Other (a)	Total	
		'000 kg		\$'000
1974-75 .....	102 261	5 191	107 452	125 044
1975-76 .....	96 224	5 688	101 912	119 179
1976-77 .....	92 317	6 125	98 442	155 293
1977-78 .....	82 888	4 205	87 092	149 768
1978-79 .....	83 131	4 224	87 355	162 349

(a) Includes fellmongered wool, dead wool and wool exported on skins.

### Wool Quality and Marketing

For many years approximately 9 per cent of the wool grown in South Australia was sold outside the auction system. This percentage has increased since the 1970-71 season reaching 19 per cent in 1972-73, falling to 14 per cent in 1973-74 and again rising to 22 per cent in 1976-77. Of the South Australian wool passing through the auction system approximately 85 per cent is received by the Adelaide selling centre with the remainder, predominantly of South Eastern origin, going to Victorian selling centres. A similar inflow of wool occurs from western New South Wales, and to a lesser extent from western Victoria.

Because of the development of a system of Objective Measurement for wool the traditional method of displaying wool for sale, whereby sample bales are opened for inspection by buyers, is declining in importance and much wool is now sold by sample. A high standard of clip preparation is required for sale by sample as there must be very little variation between the bales of wool of each grade.

When a suitable lot is received into store a core sample is taken and is tested to give measures of average fibre diameter (mean micron), degree of vegetable fault, and yield of wool (by three methods) and this information is entered on a certificate. As various other factors (*e.g.* length of wool, type of vegetable fault) must be assessed, a grab sample of 8 kg is taken from each lot and this is displayed on a show floor, together with the Objective Measurement certificate, for examination by buyers.

An advantage of the Objective Measurement system of clip preparation is that the sample may be inspected at a site remote from the location of the bulk of the clip. This has enabled wool held in Adelaide stores to be inspected, and sold, in Melbourne sales, which is of particular value to growers who deliver wool in late autumn and winter when there may be six to eight weeks between sales in Adelaide.

#### Quality Analysis of Greasy Wool Sold at Auction in South Australia

Mean Micron Classification	1975-76	1976-77	1977-78	1978-79
20 and finer .....	3.7	4.1	6.0	2.9
21 .....	11.7	14.0	18.3	9.2
22 .....	19.3	21.7	25.0	23.3
23 .....	26.5	26.4	22.7	20.6
24 .....	16.4	14.4	11.9	18.8
25 .....	8.5	7.8	5.6	10.4
26 .....	5.4	4.4	3.1	5.2
27 to 38 .....	6.7	5.6	5.6	7.0
Coarser Oddments .....	1.8	1.6	1.8	2.6
Total .....	100.0	100.0	100.0	100.0

The incidence of vegetable matter reduces the yield of all wool types. If the extent of vegetable fault is greater than 14 per cent of the wool's greasy weight the wool has to be treated by the carbonising process. In most seasons approximately 70 per cent of South Australian wool is free of, or contains only light burr and seed; almost 15 per cent contains medium or heavy burr and seed and some 13 per cent is carbonising wool.

#### Incidence of Vegetable Fault in Wool Sold at Auction in South Australia

Season	Free or Near Free	Light Burr and/or Seed	Medium Burr and/or Seed	Heavy Burr and/or Seed	Carbonising Wool	Combing Oddments	Total
Percentage of Total Number of Bales							
1974-75 .....	49.7	24.6	8.6	2.7	12.7	1.7	100.0
1975-76 .....	37.0	31.8	12.7	3.1	13.6	1.8	100.0
1976-77 .....	37.8	31.7	13.4	2.8	12.7	1.6	100.0
1977-78 .....	44.2	32.1	9.1	1.6	11.2	1.8	100.0
1978-79 .....	39.3	32.6	13.6	2.4	9.5	2.6	100.0

Details relating to Adelaide wool sales during the past five seasons are shown in the following table.

#### Adelaide Wool Sales

Season	Wool Sold (Scoured and Greasy)		Amount Realised	Average Price Per kg (Greasy)	In Store at End of Season
	Bales	Weight			
	Number	'000 kg	\$'000	Cents	Bales
1974-75 .....	563 483	84 962	102 054	120.12	22 762
1975-76 .....	517 176	77 810	104 626	134.46	17 079
1976-77 .....	482 682	73 652	127 705	173.39	13 582
1977-78 .....	397 183	62 755	112 350	179.03	6 829
1978-79 .....	383 352	62 386	120 813	193.65	10 138

#### Wool Prices

Prices paid for wool sold in South Australia tend to be on average less than prices realised in other States, this being partly attributable to the large proportion of medium to broad quality wools grown in South Australia and in western New South Wales. In 1978-79 the average price for wool sold at auctions in Australia was 205.24 cents per kg greasy, compared with 193.65 cents per kg in South Australia.

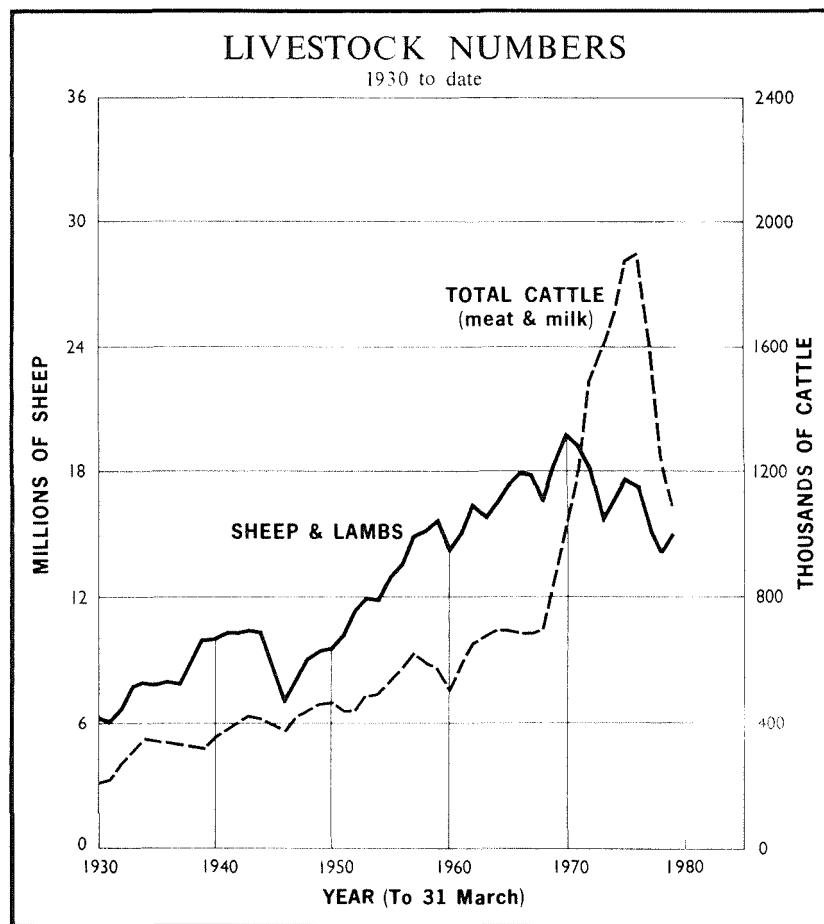
#### CATTLE

In comparison with other States, cattle grazing is not a major industry in South Australia. Of the cattle in Australia at 31 March 1979 just over 4 per cent of those used mainly for meat production and about 6 per cent of those for milk production were in South Australia. At 31 March 1979 the total number of cattle in South Australia was 1 086 000.

#### Cattle Numbers: Statistical Divisions, South Australia At 31 March 1979

Classification	Statistical Division							Total
	Adelaide	Outer Adelaide	Yorke and Lower North	Murray Lands	South East	Eyre	Northern	
'000								
Cattle for milk production:								
Bulls (a) .....	0.1	1.0	0.2	0.4	0.7	—	—	2.4
Cows .....	4.1	49.0	4.2	22.0	23.9	0.7	1.2	105.1
Heifers .....	0.9	12.5	1.2	5.2	5.6	0.2	0.4	26.0
Calves under one year .....	0.8	9.5	1.2	4.7	4.9	0.2	0.3	21.6
House cows .....	0.1	0.7	0.8	0.7	0.8	1.0	0.4	4.6
Total .....	6.0	72.7	7.6	32.9	36.0	2.1	2.3	159.6
Cattle for meat production:								
Bulls (a) .....	0.2	2.5	1.2	1.7	9.8	1.1	4.9	21.4
Cows and heifers .....	6.3	54.0	21.5	46.5	219.4	21.2	128.0	497.0
Calves under one year .....	3.0	27.7	11.5	28.7	112.9	11.8	74.8	270.3
Other cattle .....	1.4	7.9	4.9	7.3	61.0	1.8	53.3	137.6
Total .....	10.9	92.1	39.0	84.3	403.1	35.8	261.0	926.2
Total cattle .....	16.9	164.8	46.7	117.2	439.1	37.9	263.3	1 085.9

(a) Used or intended for service.



#### Cattle for Meat Production

Numbers of cattle for meat production have increased in South Australia. At 31 March 1964, 424 000 cattle for meat production were recorded (this figure is not strictly comparable with earlier figures because of a change of classification adopted in 1964); by 31 March 1969, 631 000 cattle were reported for meat production on 8 706 rural establishments. The number at 31 March 1976 had risen to 1 683 000 cattle, but since then numbers have declined significantly and at 31 March 1979 there were 926 000 cattle for meat production.

In the northern pastoral areas, Shorthorns are the predominant breed and there are lesser numbers of Herefords; in the South East, Herefords and Shorthorns are the main breeds and there are substantial numbers of Aberdeen Angus while near Adelaide, where a number of studs are located, several breeds are well represented. In recent years several European breeds have been introduced, most notably the Charolais.

### Cattle for Milk Production

From March 1964 to March 1968 the total number of cattle for milk production declined by 39 000 to 231 000. A further decline in total numbers began in 1972-73 and the total number at March 1979 was 160 000. Distribution within the State is little changed although there has been some tendency for concentration in the principal dairying areas.

Properties in South Australia on which dairying is the main activity are situated mainly in the areas where high rainfall or irrigation permits the growing of sown pastures, but many of the mixed farms in the better cereal growing areas carry herds used mainly for milk production. Dairy production on these farms is almost entirely in the form of cream for butter making, whereas the properties in the sown pasture areas mainly market whole milk, either for consumption in the Adelaide area or for cheese making.

The Adelaide Hills district, comprising the Mount Lofty Ranges and areas as far south as Cape Jervis and Encounter Bay, embraces some of the best dairy land in the State and includes most of the properties devoted specifically to dairy farming. Of the breeds used mainly for milk production, Friesians and Jerseys predominate, with Guernseys, Australian Illawarra Shorthorn, Ayrshires and their crosses in use to a lesser extent.

The Lower Murray swamps extending from Mannum to Wellington are reclaimed areas ideally suited to dairying pursuits, combining the attributes of suitable climate, good soil, and an abundant water supply. The area has a very high carrying capacity of predominantly Friesian cattle.

The Lakes District owes much to the barrages across the mouth of the Murray which have helped to maintain the waters of Lake Alexandrina and Lake Albert in a reasonably fresh state. These have greatly contributed to the improvement of the productivity of this area and also have had the effect of maintaining a greater control over the level of the water in the river, thereby greatly facilitating irrigation of the reclaimed swamps upstream. The cattle for milk production are principally Jersey breed.

The most important dairying area not serving the Adelaide market is the Lower South East, where the high rainfall and low evaporation rate combine to allow a fairly long growth period after the autumn and winter rains and spring flush of feed. Most breeds are well represented in the district, the Jersey and Friesian being slightly more popular than other breeds.

## DAIRY PRODUCE

### Milk

Total milk production in any one year is not known precisely. However, as details are known of two major components of total milk utilisation in South Australia, namely the amount consumed by factories in the production of milk, cheese, butter and other milk products and home consumption in the Metropolitan Milk Board area, a carefully considered estimate can be made.

The following table shows the estimated production of whole milk and the quantity of this milk used for various purposes in 1978-79 and earlier seasons.

## Production and Utilisation of Milk, South Australia

Year	Total Milk Produced	Milk Used for				
		Butter (a)	Factory Cheese (b)	Home Consumption		
				Milk Board Area	Outside Milk Board Area	Other Purposes
'000 litres						
1974-75 .....	426 371	89 458	194 335	91 828	39 917	10 833
1975-76 .....	397 500	64 947	192 166	90 868	39 501	10 018
1976-77 .....	354 912	56 112	157 951	91 225	39 656	9 968
1977-78 .....	316 681	51 136	128 960	92 213	40 085	(c) 4 288
1978-79 .....	321 199	45 995	140 504	91 068	39 587	4 044

(a) Includes farm production of butter until 1976-77.

(b) Factory production accounts for virtually all cheese produced.

(c) From 1977-78 other processing milk only: not comparable with previous years.

## PIGS

In South Australia pigs were normally kept as a sideline on mixed farms or in conjunction with dairy cattle but the trend is towards specialising in pigs.

There have been substantial fluctuations in the pig population from year to year induced by the exceptional variability of prices. In recent years the numbers have generally declined. The total number exceeded 200 000 for the first time in 1966 and has continued to exceed that number in subsequent years. Of the 330 000 pigs at 31 March 1979, approximately 58 per cent were in Outer Adelaide, and Yorke and Lower North Divisions. The principal breeds in South Australia are Large White, Berkshire, Landrace and Tamworth.

The following table shows the number of pigs on rural establishments at 31 March for the last five years.

## Pig Numbers, South Australia

At 31 March	Boars	Breeding Sows	All Other	Total
1975 .....	4 664	44 318	299 973	348 955
1976 .....	4 533	42 259	279 132	325 924
1977 .....	4 376	41 431	270 700	316 507
1978 .....	3 897	39 763	267 286	310 946
1979 .....	3 946	42 727	283 743	330 416

In the following table, rural establishments with pigs at 31 March 1978 are classified according to the size of the pig herd and the number of breeding sows. Of the 21 909 establishments of all types, 3 179 carried pigs.

**Rural Establishments Classified to Number of Breeding Sows and Size of Pig Herd  
South Australia, 1977-78<sup>(a)</sup>**

Number of Breeding Sows	Size of Pig Herd (Numbers)					Establishments with Breeding Sows
	1-9	10-19	20-49	50-99	100 and Over	
1-4 .....	279	255	263	27	4	828
5-9 .....	32	68	324	233	15	672
10-19 .....	—	11	55	232	201	499
20-49 .....	—	—	3	29	255	287
50-99 .....	—	—	—	1	98	99
100 and over .....	—	—	—	—	27	27
Total .....	311	334	645	522	600	2 412

(a) Excludes 767 establishments with pig herds which carried no breeding sows.

### MEAT PRODUCTION AND MARKETING

South Australia is a relatively small meat producer, providing approximately 8 per cent of total Australian production. The following table shows the number of livestock slaughtered for human consumption (including exports) and the production of meat during the last five years. Slaughterings and meat production on rural establishments are included in these figures.

#### Livestock Slaughtered and Meat Produced, South Australia

Season	Livestock Slaughtered for Human Consumption			Meat Production (Bone-in-Weight)			
	Cattle and Calves	Sheep and Lambs	Pigs	Beef and Veal	Mutton and Lamb	Pigmeat	Total
'000							
1974-75 .....	465	2 984	344	84 649	54 818	18 699	158 166
1975-76 .....	549	3 561	342	92 012	62 971	19 264	174 247
1976-77 .....	656	3 426	344	110 058	60 472	19 455	189 985
1977-78 .....	744	3 240	376	125 011	56 796	21 334	203 141
1978-79 .....	658	2 523	402	116 500	47 766	24 145	188 411

Average market prices of some of the principal classes of livestock are set out in the next table.

#### Livestock, Average Prices at Adelaide Market

Class of Stock	1975	1976	1977	1978	1979
Dollars					
Fat cattle:					
Bullocks and steers;					
Prime, medium .....	82.55	111.73	132.88	208.63	423.10
Useful .....	40.58	41.59	55.10	83.52	206.10

Livestock, Average Prices at Adelaide Market (*continued*)

Class of Stock	1975	1976	1977	1978	1979
Dollars					
<i>Fat cattle (continued)</i>					
Cows;					
Prime, medium .....	53.73	85.87	109.25	156.83	341.11
Good .....	34.93	43.97	61.31	105.64	227.23
Calves;					
Prime vealers .....	31.10	33.46	44.71	76.47	154.59
Good .....	23.91	23.08	30.08	57.73	98.21
<i>Fat sheep:</i>					
Merino wether;					
Prime .....	6.17	9.05	13.98	16.84	21.44
Medium .....	3.90	5.31	8.96	14.12	20.42
Lambs;					
Prime, medium .....	9.56	10.83	14.82	17.42	23.57
Good .....	6.00	6.21	9.98	13.16	20.66
<i>Pigs:</i>					
Choppers .....	125.87	123.69	111.39	142.46	205.01
Baconers .....	69.04	68.95	67.45	76.74	98.40
Porkers .....	40.56	42.12	40.83	46.23	63.04

## GROSS VALUE OF LIVESTOCK PRODUCTS AND SLAUGHTERINGS

Gross value is the value placed on recorded production at the wholesale prices realised in principal markets. The following table shows for the past five years the gross value of livestock products, and livestock slaughterings and disposals.

Gross Value of Livestock Products and Livestock Slaughterings and Disposals  
South Australia

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79 <sup>p</sup>
LIVESTOCK PRODUCTS (\$'000)					
Wool .....	122 442	131 865	153 550	145 277	161 985
Whole milk used for:					
Butter .....	3 594	2 581	2 619	2 834	2 644
Cheese .....	12 942	11 603	10 188	11 044	12 604
Human consumption and other purposes ..	14 962	15 986	17 629	20 415	21 303
Eggs .....	14 043	13 618	14 702	17 351	19 497
Honey and beeswax .....	2 223	2 067	1 670	3 298	2 323
Total livestock products	170 205	177 720	200 357	200 220	220 357
LIVESTOCK SLAUGHTERINGS AND DISPOSALS (\$'000)					
Cattle and calves .....	43 415	63 539	99 363	98 197	134 124
Sheep and lambs .....	22 212	25 832	39 546	64 261	45 318
Pigs .....	23 435	21 562	21 850	23 459	29 871
Poultry .....	13 723	15 158	18 089	22 673	24 617
Total livestock slaughterings and disposals	102 786	126 091	178 848	208 589	233 930

## OTHER RURAL INDUSTRIES

**Poultry Farming**

Poultry farming is a specialised and distinct industry and it is from the specialised hatcheries and chicken raising establishments that the bulk of commercial production is obtained. The industry can be divided into two categories; the production of eggs, and the raising of poultry for meat. Chickens, scientifically bred for rapid weight gain and known as 'broilers', account for over 90 per cent of total poultry slaughtered.

The main production centres for both categories of this industry are located within an 80 kilometre radius of Adelaide, near the processing works and main consumption outlets. Particular concentrations of growers are at Murray Bridge and Gawler, with some broiler growers established in the Adelaide Hills.

The trend in the egg industry in South Australia is towards a reduction in the total number of poultry farms, but an increase in average flock size. Housing of birds for commercial purposes is largely planned on the intensive principle, with deep litter pens or single and multiple bird cage units. Laying stock consists mainly of a specially produced crossbred between the White Leghorn and Australorp breeds.

The annual average egg production controlled by the South Australian Egg Board was 10.1 million dozen in the five years ended 1965-66, 15.4 million dozen over the next five years and 19.6 million dozen in the five years ended 1975-76. However, these figures do not take into account movement of eggs interstate independently of the Egg Board, which may represent a significant proportion of total egg production.

**Poultry Numbers and Egg Production, South Australia<sup>(a)</sup>****At 31 March**

Particulars	1975	1976	1977	1978	1979
'000					
Hens and pullets .....	1 716	1 410	1 255	1 448	1 512
Other fowls and chickens .....	2 476	2 976	2 708	2 737	2 957
Ducks .....	29	18	10	9	9
Turkeys .....	13	12	9	7	5
Egg production (b) .....	227 382	204 878	186 042	203 028	205 573

(a) Excludes poultry kept in backyards.

(b) Recorded by the South Australian Egg Board. Year ended 30 June.

**Broiler Industry**

The broiler industry in South Australia has grown rapidly during the past 20 years, annual production increasing from about half a million birds in 1959 to over 19 million birds at the present time. Broilers are specially bred meat strain birds of either sex, that are slaughtered between eight and ten weeks of age at a live weight of approximately 1.5 kg. This rapid growth and efficient conversion of feed to meat has been achieved by extensive breeding programs; the use of specially prepared high protein and energy value poultry feeds; growth promotion and disease control drugs; and by the development of enclosed, factory-like broiler houses, with controlled temperature, ventilation and light, conducive to fast growth.

The following table shows the number of eggs set and chicks hatched for the last five years.

**Eggs Set and Chicks Hatched in Commercial Hatcheries  
South Australia**

Year	Chicks Hatched (b) and Intended to be Raised for:					
	Eggs Set (a)		Chicken Meat		Egg Production	Breeding (d)
	Meat Strains	Egg Strains	Meat Strains:	Egg Strains:	Egg Strains: Pullet	Egg Strains: Pullets and Cockerels
'000						
1974-75 .....	20 448	4 260	16 089	65	1 723	13
1975-76 .....	21 884	4 585	17 789	52	1 833	12
1976-77 .....	22 506	4 057	19 167	40	1 558	n.a.
1977-78 .....	24 182	4 038	20 117	36	1 431	n.a.
1978-79 .....	26 005	3 909	21 362	74	1 535	22

(a) Including eggs which failed to hatch. (b) Excluding chicks destroyed. (c) Egg strain chicks sold as 'unsexed' have been allocated equally between chicks for chicken meat and chicks for egg production. The number so reported was 69 000 in 1974-75; 54 000 in 1975-76; 45 000 in 1976-77; 26 000 in 1977-78 and 21 000 in 1978-79.

(d) Details of meat strain chicks for breeding purposes are not available for publication.

The following table shows details of poultry slaughtered for human consumption for the last five years.

**Poultry Slaughtered for Human Consumption  
South Australia<sup>(a)</sup>**

Period	Chickens (Broilers, Fryers or Roasters)	NUMBER SLAUGHTERED ('000)				Total
		Hens and Stags	Ducks and Drakes	Turkeys		
1974-75 .....	15 249	524	24	7	15 805	
1975-76 .....	16 177	432	21	7	16 637	
1976-77 .....	17 251	466	12	5	17 734	
1977-78 .....	19 452	421	16	4	19 894	
1978-79 .....	19 867	465	26	5	20 363	
DRESSED WEIGHT OF POULTRY SLAUGHTERED (Tonnes)(b)						
1974-75 .....	16 773	834	51	31	17 689	
1975-76 .....	18 064	661	40	28	18 793	
1976-77 .....	19 243	761	25	19	20 048	
1977-78 .....	21 892	722	33	21	22 667	
1978-79 .....	22 351	801	46	33	23 230	

(a) Excludes geese slaughtered.

(b) Dressed weight of whole birds, pieces and giblets as reported by producers.

**Beekeeping**

Beekeeping in South Australia is a small industry—in 1978-79 there were 433 beekeepers with forty or more hives. Most commercial apiarists operate on a migratory basis, following the flowering of the various species of honey flora. The production of honey and beeswax fluctuates considerably from year to year, depending upon seasonal conditions.

**Beekeeping, South Australia<sup>(a)</sup>**

Season	Beekeepers	Hives		Honey Produced	Yield of Honey per Productive Hive	Beeswax Produced
		Productive	Un- productive			
1975-76 .....	482	83 870	16 107	4 592	55	80
1976-77 .....	455	75 155	23 128	2 787	37	58
1977-78 .....	433	78 907	14 020	4 316	55	81
1978-79 .....	433	72 775	20 172	3 048	42	62

(a) Excludes particulars for producers having less than forty hives.

**Further References**

Additional information may be found in the following publications:

**South Australian Office**

- 7103.4 *Agriculture: General Summary*
- 7104.4 *Crops and Livestock in Hundreds within Counties*
- 7202.4 *Livestock and Livestock Products*
- 7203.4 *Chicken Hatchings and Poultry Slaughterings*
- 7301.4 *Viticulture*
- 7304.4 *Cereals*
- 7401.4 *Machinery on Rural Holdings*
- 7503.4 *Value of Agricultural Commodities Produced*

**Central Office**

- 7203.0 *Livestock Statistics*
- 7205.0 *Meat Statistics*
- 7207.0 *Chicken Hatchings and Poultry Slaughterings*
- 7208.0 *Milk Statistics*
- 7212.0 *Wool Statistics*
- 7214.0 *Beekeeping*
- 7303.0 *Fruit Statistics*
- 7503.0 *Value of Agricultural Commodities Produced*

**9.2 MINING, FORESTRY AND FISHERIES****MINING**

South Australia has a well developed mineral industry and in recent years natural gas has surpassed iron ore as the major product. The State also has very large resources of industrial minerals which make up a significant proportion of the total annual value of mineral production which exceeded \$160 million in 1978-79.

### MINING ADMINISTRATION

The Mining Act, 1971-1978 reserves all minerals to the Crown and regulates and controls all mining operations in South Australia.

The state and conditions of the mine, machinery, ventilation, and all other matters relating to the safety, health and well-being of the employees and general public are regulated by the Mines and Works Inspection Act, 1920-1978.

The Petroleum Act, 1940-1978 and the Petroleum (Submerged Lands) Act, 1967-1974 provide for the control of petroleum exploration and the production, conservation and distribution of petroleum by pipeline.

The administration of these Acts is the responsibility of the Minister of Mines and Energy and the Director-General of Mines and Energy. The principal functions of the Department of Mines and Energy are:

- (i) the administration of mining and petroleum legislation including the granting of mineral leases and collection of royalties and fees;
- (ii) geological and geophysical investigations to ascertain the extent and nature of the State's mineral resources;
- (iii) drilling to test mineral deposits, petroleum reserves and underground water supplies;
- (iv) the testing and treatment of minerals, generally in arrangement with the Australian Mineral Development Laboratories;
- (v) control of mining and rehabilitation;
- (vi) co-ordinating State Government activities and formulating policy advice in the discovery, assessment and development of all energy resources within the State.

### MINERAL INDUSTRY STATISTICS

A mining establishment is one predominantly engaged in an activity specified in Division B of the Australian Standard Industrial Classification (ASIC). The ASIC defines 'mining' as including the extraction of minerals occurring naturally as solids such as coal and ores, liquids such as crude petroleum, or gases such as natural gas, by such processes as underground mining, open-cut extraction methods, quarrying, operation of wells or evaporation pans, dredging or recovery from ore dumps or tailings. Establishments mainly engaged in dressing or beneficiating ores or other minerals by crushing, milling, screening, washing, flotation or other, including chemical beneficiation processes, or mainly engaged in briquetting or iron ore pelletising are included because the processes are generally carried out at or near mine sites as an integral part of mining operations. Natural gas absorption and purifying plants are also included.

Excluded are establishments mainly engaged in refining or smelting, or in the manufacture of products of mineral origin.

Statistics on the operations of establishments in Division B are collected each year in the mining census, which since 1968-69 has been conducted on an integrated basis with other economic censuses.

The following two tables detail mining establishments operations in South Australia for 1978-79 classified according to industry subdivision.

Metallic minerals (copper and iron ore being the major industries), coal and natural gas operations accounted for 57 per cent of mining employment. Construction materials (building stone, gravel, sand and road materials) industries employed 29 per cent of total mining employment.

**Mining Establishments: Summary of Operations by Industry Subdivision  
South Australia, 1978-79**

Industry Subdivision	ASIC Code (a)	Number of Establishments Operating at 30 June 1979	Persons Employed (b)			Wages and Salaries
			Males	Females	Total	
Metallic minerals .....	11	5				\$ million
Coal .....	12	1				
Crude petroleum including natural gas .....	13	1				
Construction materials .....	14	63	751	69	820	9.1
Other non-metallic minerals .....	15	48	360	9	369	4.3
Total mining, excluding services to mining .....	..	118	2 576	258	2 834	35.6

(a) Australian Standard Industrial Classification 1978 edition.

(b) At 30 June 1979; includes working proprietors.

**Mining Establishments: Turnover and Value Added by Industry Subdivision  
South Australia, 1978-79**

Industry Subdivision	ASIC Code (a)	Turnover	Stocks at 30 June		Purchases, Transfers in and Selected Expenses (b)	Value Added (b)
			1978	1979		
Metallic minerals .....	11		\$ million			
Coal .....	12		148.0	22.6	18.7	63.5
Crude petroleum including natural gas .....	13					80.5
Construction materials .....	14	27.7	2.4	2.5	9.8	18.1
Other non-metallic minerals .....	15	28.1	3.4	3.4	17.5	10.5
Total mining, excluding services to mining .....	..	203.9	28.5	24.6	90.8	109.1

(a) Australian Standard Industrial Classification 1978 edition.

(b) From 1978-79 method of calculating Value Added has been changed to include 'Rent, leasing and hiring expenses', which is now included in Purchases, Transfers In and Selected Expenses.

**MINERAL COMMODITY STATISTICS**

Mineral commodity statistics published in the *South Australian Year Book* are those recorded by the Director-General of Mines and Energy. The quantity and value of production of the major minerals for the years ended 30 June 1978 and 1979 are listed in the following table.

**Mining and Quarrying Production, South Australia<sup>(a)</sup>**

Mineral	Unit of Quantity	Quantity		Value (b)	
		1977-78	1978-79	1977-78	1978-79
\$'000					
Metallic:					
Copper .....	'000 tonnes	2 189	2 705	8 942	16 495
Iron Ore .....	'000 tonnes			19 431	24 028
Other .....	..	..	..	373	45

Mining and Quarrying Production, South Australia<sup>(a)</sup> (continued)

Mineral	Unit of Quantity	Quantity		Value (b)	
		1977-78	1978-79	1977-78	1978-79
\$'000					
Non-metallic:					
Barite .....	'000 tonnes	10	13	395	515
Clays .....	'000 tonnes	925	834	1 324	2 009
Coal .....	'000 tonnes	1 757	1 514	8 820	11 266
Dolomite .....	'000 tonnes	596	666	1 212	1 477
Gypsum .....	'000 tonnes	618	656	2 439	2 613
Limestone .....	'000 tonnes	1 888	2 042	3 258	3 926
Opal (c) .....	..	..	..	35 000	30 000
Salt .....	'000 tonnes	723	634	2 891	2 410
Talc, soapstone .....	'000 tonnes	15	15	202	445
Other .....	..	..	..	896	938
Construction material quarrying	'000 tonnes	16 030	12 284	20 211	29 704
Natural gas (d) .....	millions of m <sup>3</sup>	2 516	2 860	38 000	48 529
Total .....	..	..	..	143 393	174 400

(a) Quantities disposed of as recorded by the Director-General of Mines and Energy.

(b) Ex-mine site.

(c) Estimated.

(d) Value at Moomba plant outlet.

Details of mining of individual minerals are given below. Reference should also be made to Part 1.3 which contains particulars of the location of mineral resources.

### Iron Ore

The only proved high grade iron ores of South Australia lie in the Middleback Ranges to the west of Whyalla. The ranges are composed primarily of iron-rich rocks in which occur local concentrations of high grade ore.

The Iron Monarch deposit near Iron Knob has provided the bulk of the iron ore for Australia's steel industry for many years. Production from this and the smaller deposits of Iron Prince and Iron Baron is maintained by the Broken Hill Proprietary Company Limited (BHP)—in 1978-79 production was 2.7 million tonnes.

### Copper

Copper mining was very important in the early days of the settlement of South Australia. The rich discoveries at Kapunda in 1842, Burra in 1845, and Wallaroo-Moonta in 1859-60 came at a time when the colony's development was stagnating and severe financial difficulties were being encountered. Many small copper mines, scattered throughout the central metalliferous areas, were also opened but most of the mines only lasted until the richer secondary copper cut out at depths mostly less than 150 metres.

From 1842 to 1923, when the great Wallaroo-Moonta mines closed, copper was by far the State's most important mining produce. The copper products accounted for over eighty per cent of the State's recorded mineral production (construction materials were not recorded and so not included). The copper products sold during this period contained 450 000 tonnes of copper metal and were worth \$33 million giving an average of \$72 per tonne of copper in the products.

During the next forty-five years (1924-1968), until the commencement of the mining

boom, copper production was very small and intermittent with a production of only 5 600 tonnes of copper in the mineral products.

The renewed interest in copper mining during the boom led to the discovery of new, but lower grade, ore bodies at the old copper fields of Kanmantoo and Mount Gunson, and the working of remnant low-grade ore at Burra. These deposits are worked by open-cut methods which can produce much larger tonnages than the underground methods used to produce most of South Australia's copper during the earlier period of copper mining.

There were only two copper producers in 1978-79 because the continued low world copper prices had caused the continued closure of the smaller producers and Kanmantoo mine which is being run on a care and maintenance basis until world copper demand increases. In 1978-79 the Mount Gunson and Burra mines together produced 14 784 tonnes of copper in the concentrates and copper oxide which they sold. This was 23 per cent higher than the output of 11 977 tonnes of copper for 1977-78.

Eighty-two per cent of the production came from the Mount Gunson mine which sells copper sulphide flotation concentrates to Japanese smelters. Adelaide and Wallaroo Fertilizers Ltd. at Burra uses the ammonia leaching process to produce high quality black copper oxide of seventy-seven per cent grade copper which is sold direct to industry in Australia and overseas.

The ex-mine site value of the copper products sold in 1978-79 was \$16.5 million.

#### Zinc

In South Australia the only production of zinc comes from a high grade (about forty per cent zinc) deposit of zinc silicate found at Puttapa near Beltana in the Flinders Ranges. Several other smaller occurrences of this unusual zinc ore have been found in this part of the State but they are not being mined at present. The deposit is of high enough grade not to need concentration but is mined, crushed, and then sent to various markets in Europe, Africa and to Risdon in Tasmania with small amounts going direct to the Australian fertiliser industry for use as trace element supply for zinc deficient soils.

The plant at Puttapa has been placed on a care and maintenance basis with sales from stockpiles. In 1978-79 no sales were negotiated.

#### Barite

There are widespread occurrences of barite (barytes) throughout the Adelaide System rocks of South Australia. Deposits are located in a number of areas including the Mount Lofty and Flinders Ranges and also the Olary district. Barite is still used in the paint and other industries, but the main use is in drilling mud for oil exploration where the grade does not have to be so high. Production of barite totalled 12 767 tonnes in 1978-79.

The company operating the Oraparinna Mine in the Flinders Ranges is the major Australian producer of barite. In recent years it has been the main supplier of high grade ore for industrial use.

#### Gypsum

South Australian deposits contain by far the largest part of Australian reserves of gypsum. The deposits in general have been formed in coastal basins cut off from the ocean, giving rise to extensive deposits of rock gypsum. The most important coastal deposits are found at Lake MacDonnell and on Kangaroo Island. Inland deposits mainly of seed gypsum occur at Moonabie, Lake Fowler, Cooke Plains and along the Murray River. The gypsum deposits have been worked extensively over the past fifty years to provide the bulk of Australasian requirements for the plaster industry and for portland cement manufacture. In 1978-79 production was 656 000 tonnes.

Reserves of high grade gypsum at Lake MacDonnell have been proved by the Department of Mines and Energy to exceed 500 million tonnes, sufficient to meet Australasian requirements for the plaster industry and for portland cement for many years. The port of Thevenard, 55 kilometres from the deposit by rail, has been deepened to accommodate larger ships of up to 20 000 tonnes capacity.

#### Salt

The semi-arid climate and high evaporation rate along much of South Australia's coastline, together with the high salinity of the gulf waters, create very favourable conditions for the production of salt by solar evaporation. In the early days the availability of sites close to cheap transport led to the establishment of solar salt works at the head of Spencer Gulf near Port Augusta and at Whyalla, at Price on the eastern shore of Yorke Peninsula, and in 1940 at Dry Creek near Adelaide. In addition several operators recover salt from shallow salt-lakes on Yorke Peninsula and elsewhere.

There was 634 000 tonnes of salt produced in 1978-79. The industry in South Australia is capable of expansion, but the future export market appears to have been largely captured by salt development in Western Australia.

#### Opal

The estimated value of raw opal production in 1978-79 was \$30 million, a slight decrease on 1977-78. In terms of value it was the second most important mineral produced in South Australia during 1978-79. Overseas exports of opal from South Australia during 1978-79 were reported at \$10 million.

In spite of the value of opal being won at present, opal mining remains a small scale operation at Andamooka and Coober Pedy. The distances from Port Augusta to Andamooka and from Port Augusta to Coober Pedy are 290 and 630 kilometres respectively.

Mining at both centres is relatively shallow, rarely exceeding 30 metres. During 1976, two new fields were discovered at Andamooka as a result of a subsidised mining program by the Department of Mines and Energy, and areas of potential opal bearing ground have been outlined. New finds at Stuart Creek, north of Andamooka, and Mintabie, north of Coober Pedy produced rushes to each field.

#### Talc

The principal occurrences of talc are to be found at Mount Fitton in the northern Flinders Ranges and in the Gumeracha and Lyndoch districts. From these sources 15 000 tonnes were mined in 1978-79. The Mount Fitton talc is particularly high grade, and is in demand for use by the cosmetic industry. Lower grade material is used in the rubber, paint, and ceramics industries. Bulk samples have been taken from the Tumby Bay deposit on Eyre Peninsula to enable the quality to be tested.

#### Coal

South Australia is deficient in accessible bituminous coal resources and the only mining is of sub-bituminous coal at Leigh Creek. The present development of the field commenced with Department of Mines and Energy drilling operations in 1941. The Electricity Trust of South Australia assumed control of the field in 1948 and developed it as a source of fuel for the Port Augusta power station. Meanwhile testing by the Department of Mines and Energy continued for some years, proving a total of 52 million tonnes of coal available by open-cut methods and a further 370 million tonnes of underground reserves. Changing economic conditions have caused these estimates to be revised to 150 million tonnes and 280 million tonnes respectively, of which approximately 37 million tonnes has been mined to date by open-cut methods. Combined mining

development of the Telford Basin at Leigh Creek requires the relocation of Leigh Creek township. Plans for the new town have been prepared and work is almost completed.

Coal production in 1978-79 was approximately 1.5 million tonnes. Almost the entire production is railed to Port Augusta for use in power generation.

### Natural Gas

The natural gas production in 1978-79 was 2 860 million cubic metres valued at the plant outlet at \$49 million, a fourteen per cent increase in volume and a twenty-seven per cent increase in value to production in 1977-78.

### Limestone and Dolomite

The combined quantity of limestone and dolomite extracted for use in industry (*i.e.*, excluding road stone, etc.) each year is approximately two million tonnes. The principal deposits mined are limestone at Rapid Bay and dolomite at Ardrossan for the steel industry; limestone at Penrice, near Angaston, for the chemical and cement industries; and limestone at Klein Point for the cement industry. Details of limestone production for the years 1975-76 to 1978-79 are given in the following table.

**Limestone Production, South Australia  
(Excluding Limestone Used as Building Stone, Road Materials, Etc.)**

Classification	1975-76	1976-77	1977-78	1978-79
'000 tonnes				
Flux .....	287	298	342	534
Cement .....	903	957	1 059	1 044
Chemical .....	370	420	437	418
Other .....	35	51	51	46
Total .....	1 594	1 726	1 888	2 042

### Clay

South Australia possesses a wide variety of clays which are used for industrial purposes such as cement manufacture, building bricks and roofing tiles, refractory ware, pottery and ceramic purposes.

Details of clay production for the years 1975-76 to 1978-79 are given in the following table.

**Clay Production, South Australia**

Classification	1975-76	1976-77	1977-78	1978-79
'000 tonnes				
Brick clay and shale .....	797	864	754	698
Cement clay (shale) .....	123	129	145	89
Fire clay .....	29	14	14	38
Kaolin and ball clay .....	10	13	11	9
Pottery clay .....	7	4	1	—
Total .....	967	1 024	925	834

Because of the scarcity of local timber supplies, softwood excepted, much greater use is made of clay bricks for construction in South Australia than in other parts of Australia.

The clay brick industry is concentrated near Adelaide. There are also widely distributed occurrences of special clays for ceramic and refractory ware.

The Department of Mines and Energy, together with the Australian Mineral Development Laboratories, is continually engaged in investigations relating to the usage of clay deposits encountered during geological surveys throughout the State.

### Construction Material Quarrying

Post-war industrial expansion, accompanied by extensive housing programs and highway construction, has resulted in a rapidly increasing demand for construction materials. Production of aggregate, sand and roadstone (including all building stone) was 12 million tonnes in 1978-79 compared with 2.2 million tonnes in 1947.

**Road and Other Construction Materials, South Australia**

Type of Material	1974-75	1975-76	1976-77	1977-78
'000 tonnes				
Limestone .....	3 553	3 043	2 376	3 673
Quartzite .....	3 461	3 384	3 471	2 116
Sand .....	2 419	2 690	2 990	3 596
Other materials .....	3 514	4 069	5 518	6 616
Total .....	12 948	13 186	14 355	16 001

A variety of building stones is quarried, including, Mount Lofty sandstone, a white stone which hardens in the atmosphere; Basket Range sandstone, a light coloured stone of pleasing appearance; and Mount Gambier limestone, a bryozoal limestone of the South East. Limestone deposits have also been worked at Overland Corner, Cadell and Waikerie. A quantity of granite is extracted each year and marble occurrences are worked at Angaston, Kapunda, Macclesfield and Paris Creek. The main sources of slate in South Australia are at Mintaro and Jones Hill in the northern Flinders Ranges. Both areas supply paving slate and a large quantity is dressed and polished for use in billiard tables. A quantity of paving material is also being obtained from Wistow near Mount Barker.

Details of building stone production for the years 1974-75 to 1977-78 are given in the following table.

**Building Stone, South Australia**

Type of Stone	1974-75	1975-76	1976-77	1977-78
'000 tonnes				
Granite .....	5.0	2.8	3.1	2.8
Gravel .....	0.6	0.5	0.3	0.2
Limestone .....	16.5	20.1	15.3	17.1
Marble .....	7.4	7.2	3.8	2.0
Sandstone .....	5.0	3.9	1.6	1.6
Slate .....	7.0	7.0	3.2	5.7
Total .....	41.6	41.4	27.3	29.3

## MINERAL DEVELOPMENTS

In October 1972, agreement was reached between the consortium of companies developing the petroleum resources of the Cooper Basin and the Australian Gas Light Company to supply natural gas to the Sydney area. Natural gas deliveries into the Moomba-Sydney pipeline commenced on 22 August 1976, and gas reached the Sydney terminal at Wilton on 16 December 1976. In order to meet the increasing demands for natural gas in the Adelaide and Sydney areas, almost continuous development of Cooper Basin production facilities has taken place. In the three producing fields, Gidgealpa, Moomba and Big Lake, there are now 75 wells completed for production, and construction of gathering lines and installation of compressors to boost production is continuing. In the Moomba gas processing plant, a fifth carbon dioxide removal train was commissioned in 1979, and some rearrangement of plant facilities is being effected to improve flexibility and reliability of operation. Compressors have now been installed at six stations on the Moomba-Adelaide pipeline to increase capacity as the market grows. Standby units for these stations and Station No. 7, the most southerly one located near Booborowie, are planned.

Following Loan Council approval for a new tier of borrowings to finance infrastructure for development projects, Dow Chemical (Australia) Ltd. is undertaking a detailed engineering and economic feasibility study into the establishment of a large petrochemical complex at Redcliff. The existence of large scale imports of caustic soda for the Australian alumina industry and the imminent short fall in domestic ethylene capacity when combined with the local availability of raw materials could provide a sound economic basis for the establishment of a petrochemical plant at Redcliff. The plant would be designed to use light hydrocarbons from the Cooper Basin and salt from Lake Torrens or Spencer Gulf areas to manufacture caustic soda and a range of petrochemical products.

Indications of a dramatic upturn in mineral exploration became evident in late 1976 with the announcement by Western Mining Corporation Ltd. of a major copper and uranium discovery with significant contents of gold and rare earths at Roxby Downs, 260 kilometres north of Port Augusta in a new area west of Andamooka. This has stimulated interest in the entire area of the Stuart Shelf and has resulted in a large number of applications for exploration licences.

Coal investigations by private companies increased during 1978-79 and resulted in the discovery of brown coal in drilling operations by Western Mining Corporation Ltd. (WMC) near Kingston in the South-East. These discoveries are additional to coal finds by WMC in the Victorian portion of the Otway Basin. Their significance is being assessed. The assessment of the deeper Leigh Creek coal resources has been completed and mining is planned there until at least the year 2005.

The excavation of the Wakefield brown coal deposit by means of a trial pit designed to procure a 300 tonne sample for testing, is in progress adjacent to the Bowmans railway station.

The Department of Mines and Energy has continued an extensive coal exploration program in search of steaming coal for future power generation. More than \$200 000 will be spent on this exploration project, a combined program involving both ETSA and the Department of Mines and Energy.

Testing by Utah Development of the Lake Phillipson coal deposits (found originally in 1905) has indicated that the total recoverable quantity could exceed 2 000 million tonnes. These deposits of medium to low grade steam coal, which have a marginally higher calorific value than Leigh Creek coal, are located about ninety kilometres south of Coober Pedy and near the Tarcoola-Alice Springs railway.

Uranium is associated with the newly discovered copper deposits at Roxby Downs. Other small deposits of uranium in the Lake Frome area have been examined by the Department of Mines and Energy in association with Australian Mineral Development Laboratories (AMDEL) to determine if recovery is possible by in situ leaching.

Mapping and shaft sinking by the Department of Mines and Energy have proved the opal level to exist in several previously untested areas in the Andamooka area. As a result two new fields were established. Work has also begun again at Mintabie and Stuart Creek, north of Andamooka.

At 30 June 1979, 142 exploration licences were current, involving forty-two companies. The total area held under licence was approximately 145 500 square kilometres.

The Australian Mineral Foundation Inc., established at Frewville four kilometres to the east of the centre of Adelaide, provides short-term specialist training at professional and sub-professional levels for the mining and petroleum exploration and production industries.

The Australian Mineral Development Laboratories (AMDEL), also at Frewville, continue to carry out valuable research, development and laboratory service work for the mineral industry of Australia and neighbouring countries.

The Department of Mines and Energy spent approximately \$7.0 million in 1978-79 (\$6.3 million in 1977-78) on geological and other investigations, drilling and mineral research work to assist the State's mineral industry.

The following table shows details of private mineral exploration, other than petroleum, in South Australia for 1977-78 and 1978-79.

**Private Mineral Exploration (Other than Petroleum), South Australia<sup>(a)</sup>**

Particulars	Unit	On Current Producing Leases		On Other Areas		Total Private Exploration	
		1977-78	1978-79	1977-78	1978-79	1977-78	1978-79
<b>Depth drilled:</b>							
Core .....	'000 m	—	—	22	26	22	26
Non-core .....	'000 m	—	—	122	135	122	135
<b>Total depth drilled .....</b>	<b>'000 m</b>	<b>—</b>	<b>—</b>	<b>144</b>	<b>161</b>	<b>144</b>	<b>161</b>
<b>Expenditure:</b>							
<b>Drilling;</b>							
Core .....	\$'000	—	—	1 347	1 563	1 347	1 563
Non-core .....	\$'000	—	n.p.	1 633	n.p.	1 633	1 540
Total drilling	\$'000	—	n.p.	2 980	n.p.	2 980	3 103
Other .....	\$'000	n.p.	n.p.	n.p.	n.p.	6 361	7 405
<b>Total expenditure .....</b>	<b>\$'000</b>	<b>n.p.</b>	<b>n.p.</b>	<b>n.p.</b>	<b>n.p.</b>	<b>9 341</b>	<b>10 508</b>

(a) Excludes exploration for water and all development work. Excludes details of exploration by business undertakings operated by State and local government authorities.

Details of private petroleum exploration and development for South Australia are shown in the following table for the years 1975 to 1978.

**Private Petroleum Exploration and Development, South Australia<sup>(a)</sup>**

Particulars	Unit	1975	1976	1977	1978
Wells drilled (b) .....	No.	6	3	5	8
Depth drilled .....	'000 m	9.9	6.2	11.8	20.3
Expenditure:					
Private sources (c) .....	\$'000	12 796	5 257	5 714	8 096

(a) Figures obtained from Bureau of Mineral Resources, Geology and Geophysics.

(b) Number of wells reaching total depth during year.

(c) Includes payments under the *Petroleum Search Subsidy Act* 1959.

**FORESTRY**

There are an estimated 6 million hectares of land classified as wooded in South Australia, but much of this is too small or scattered to be of current economic value for wood production or is better retained in its present form for environment protection reasons. Some 780 000 hectares carry forest or forest woodland, a decreasing part of which is still exploited for minor quantities of timber and fencing or firewood materials. Many of the forested or wooded areas are of considerable value for soil conservation, watershed protection, shelter, shade and conservation of indigenous plants and animals.

Certain areas have been set aside as State forest reserves, the total area thus reserved at 30 June 1979 being 132 796 hectares. In addition the Woods and Forests Department is responsible for 2 176 hectares of reservoir lands, of which 1 143 are planted with pines.

In recent years the total area reserved has varied little, mainly because of the increasing unavailability of land. The net increase over the last five years was 5 795 hectares. During the same period the area under plantation on Forest Reserves increased by only 1 966 hectares because of a fire at Caroline which destroyed about 3 000 hectares of planted pines.

A more detailed history of forestry development in South Australia was included on pages 432-4 of the *South Australian Year Book* 1970.

**Indigenous Forests**

The natural forests of South Australia consist of eucalypt hardwoods restricted principally to the Mount Lofty Ranges, the lower Flinders Ranges, the southern portion of Eyre Peninsula, and the South East. A few species are of commercial value and these are used to a limited extent for the production of poles, posts, rails and sleepers.

Some areas of forest reserves not planted with conifers are maintained under native hardwoods but it is unlikely that further hardwood plantations will be established for timber purposes.

**Plantations**

Seedlings raised in nurseries are planted out in the forest at densities of 1 700-2 200 trees to the hectare. A series of thinnings, starting when the trees are about 20 metres high, reduces density to about 150 trees to the hectare by about age forty. These thinnings are carried out on a commercial basis and make the major contribution to present timber and pulpwood output. The final felling age is aimed at forty to fifty years although for management purposes some earlier felling has been made in the past. Trees of the same age may vary in height; on some sites trees reach 20 metres after ten years of growth, but on other sites this may not be reached until after twenty years of growth.

Exotic softwoods accounted for approximately 98 per cent of the planted forest area

at 30 June 1979. As can be seen from the accompanying table, the majority of the planted forest is in the Lower South East. The 625 mm rainfall line roughly divides the South East in two; the Lower South East, with an annual rainfall in excess of 625 mm is quite suitable for commercial forestry, but the Upper South East is not.

The following table clearly illustrates the predominant importance of one species, *Pinus radiata*, in the composition of South Australian forests. Areas of other species are now minor, although over a hundred species have been tried in earlier years.

**Forests, South Australia**  
**Area Planted During 1978 and Net Area of Plantations at 30 June 1979**

Location	Planted during 1978			Plantations at 30 June 1979		
	Softwoods		Hard-woods	Softwoods		Hard-woods
	<i>Pinus Radiata</i>	Other Pinus		<i>Pinus Radiata</i>	Other Pinus	
Hectares						
State forests:						
Northern Region;						
Bundaleer .....	—	—	—	1 363.9	35.8	196.5
Wirrabara .....	51.2	—	—	2 016.4	69.0	39.6
Other forests .....	—	—	—	—	—	146.6
Total Northern .....	51.2	—	—	3 380.3	104.8	382.7
Central Region;						
Mount Crawford .....	128.2	—	—	6 000.5	362.2	41.7
Kuitpo .....	0.4	—	—	2 189.1	371.4	114.0
Blackwood .....	—	—	—	7.4	—	—
Second Valley .....	62.8	1.8	—	1 784.2	165.4	27.4
Total Central .....	191.4	1.8	—	9 981.2	899.0	183.1
Riverland Region;						
Parilla .....	—	—	—	—	6.1	48.6
Other forests .....	—	—	—	—	—	—
Total Riverland .....	—	—	—	—	6.1	48.6
South Eastern Region;						
Penola .....	136.3	—	—	12 284.5	1 883.2	1.2
Comaum .....	18.2	—	—	2 959.6	302.8	6.7
Mount Burr .....	130.7	—	—	9 234.6	561.8	76.8
Noolook .....	98.4	—	—	3 317.6	4.0	—
Mount Gambier .....	295.6	—	—	6 983.8	701.0	7.7
Kongorong .....	—	—	—	1 328.3	6.3	—
Tantanoola .....	6.9	—	—	7 830.2	988.2	6.3
Caroline .....	176.8	—	—	4 152.1	228.3	3.9
Myora .....	52.9	—	—	5 824.0	217.3	—
Cave Range .....	—	—	—	206.9	105.2	—
Total South Eastern	915.8	—	—	54 121.6	4 998.1	102.6

**Forests, South Australia**  
**Area Planted During 1978 and Net Area of Plantations at 30 June 1979 (continued)**

Location	Planted During 1978			Plantations at 30 June 1979		
	Softwoods		Hard- woods	Softwoods		Hard- woods
	<i>Pinus Radiata</i>	Other Pinus		<i>Pinus Radiata</i>	Other Pinus	
Hectares						
Western Region;						
Wanilla .....	—	—	1·1	46·6	24·7	352·0
Waterworks reserves .....	36·3	—	—	1 016·5	126·0	3·6
Total State forests ..	1 194·7	1·8	1·1	68 546·2	6 158·7	1 072·6
Total private forests	<i>n.p.</i>		<i>16 535</i>		99	
Total forests .....	<i>n.p.</i>		<b>91 239·9</b>		<b>1 171·6</b>	

### FOREST ADMINISTRATION

#### State Forests

State forests are administered by the Woods and Forests Department which is responsible for the establishment, maintenance and exploitation of State forests, including the management of forest reserves and operation of mills for processing timber produced by those forests. The Forest Reserves are organised into Districts and are under the charge of professionally trained foresters. The Department is also the major timber producer in South Australia, and operates three sawmills and two wood preservation plants through its Commercial Division.

In earlier years, when large areas of plantations were being established, expenditure by the Department exceeded revenue, but since 1942-43 the revenue has exceeded expenditure including depreciation and interest on loans. By 1954-55 accumulated surpluses had matched expenditure on establishment and maintenance of plantations, and annual surpluses of the Department are now paid to Consolidated Revenue.

Funds employed by the Woods and Forests Department, including its milling operations, amounted to \$62 496 700 at 30 June 1979 of which \$31 800 000 was timber and land at net cost. The present value of the State-owned pine forests is approximately \$176 000 000 at current royalty rates.

#### Private Forests

Private forests accounted for approximately 18 per cent of the planted area at 30 June 1979. Two private companies operating pine plantations in the South East control the bulk of private forest land, with the balance representing a large number of holdings of a few hectares on farming and district council properties throughout the State.

### PRODUCTION

Log production is met from final fellings and thinning operations, and planned forest management ensures that the amount of timber cut each year does not exceed new

growth. For many years thinnings have provided the bulk of the logs produced but with the increasing age of the plantations the quantity of logs coming from final fellings is rising. In 1978-79 approximately forty per cent of total log production was from final fellings. With the increasing area of forest reaching the stage of regular and repeated thinning at intervals of about seven years, log production is rising steadily towards the full annual yield which can be cut indefinitely.

The following table gives the quantity of forest logs used during the years 1973-74 to 1978-79.

#### Forest Log Usage, South Australia

Year	Softwoods	Hardwoods
	Cubic Metres	
1973-74 .....	902 929	5 197
1974-75 .....	902 142	7 017
1975-76 .....	953 704	6 746
1976-77 .....	987 983	3 878
1977-78 .....	973 683	2 602
1978-79 .....	933 065	4 396

#### EMPLOYMENT

The number of persons directly employed by the Woods and Forests Department in forestry activity in recent years is given in the following table. The Department also employs 853 persons in milling activities.

#### State Forestry Employees, South Australia At 30 June

Classification	1974	1975	1976	1977	1978	1979
Professional staff:						
Foresters .....	51	53	49	49	51	50
Other .....	29	26	28	27	29	24
Non-professional field staff .....	35	38	42	42	44	39
Clerical staff .....	130	122	132	131	138	141
Labour (silvicultural forest works, etc.) .....	281	314	305	262	278	298
Total .....	526	553	556	511	540	552

The extraction of timber from State forests is carried out by contractors.

#### RESEARCH AND ADVISORY SERVICES

The virtual dependence of the South Australian forestry industry on a single species necessitates continued research into the maintenance and improvement of *Pinus radiata* resources, as well as into forestry in general.

The Woods and Forests Department maintains its own research facilities and works very closely with the South Australian Regional Station of the Division of Forest Research of the Commonwealth Scientific and Industrial Research Organization (CSIRO) at Mount Gambier. Certain aspects of forestry research are also undertaken by the Soils Division of CSIRO, the Waite Agricultural Research Institute, the University

of Adelaide, the Flinders University and the Department of Forestry of the Australian National University.

Research activities aimed at an expansion of forestry production include the development of fertiliser use, both to stimulate growth and to bring into production land previously considered unsuitable, and the improvement of planting stock through selective breeding. Silvicultural research is concerned with the maintenance of soil fertility and with combating various diseases and pests. Permanent sample plots are maintained in departmental forests for research into various aspects of forest yield and management.

The Woods and Forests Department provides an advisory service in arboriculture and distributes, through its nurseries at Murray Bridge, Belair and Berri, a wide variety of trees suitable for planting in various climatic and soil conditions.

### FOREST PROTECTION

The hot dry summer conditions normal to the State require forest management to take considerable precautions and to maintain constant vigilance against forest fire. The clearing of undergrowth, the maintenance of fire-breaks, the manning of observation towers and the constant readiness of fire fighting units are all an integral part of forestry practice.

Other protective measures include spraying to prevent plant disorders, measures to control insect pests in the forest, and the eradication of the various weeds and pests which threaten young plants.

Since the discovery of the Sirex wood wasp in Victorian forests in 1961 constant watch has been maintained for any sign of this pest in South Australian pine forests, and the State has contributed to development of biological control measures.

### FISHERIES

Commercial fishing is undertaken along the entire South Australian coastline with the exception of the unpopulated area west of Fowlers Bay. In the sheltered waters of the Gulfs, the Coorong and the West Coast bays, operators take prawns or various scale fish species while in the deeper water tuna and shark are sought. Rock lobster is taken along the more exposed parts of the coast, while abalone is dived for in most areas. Inland a small quantity of freshwater fish is caught on the River Murray each year.

In terms of value of production, the most important species are prawns and rock lobster, with tuna, abalone, shark and whiting also making a significant contribution. In terms of employment, however, the general marine scale fishery is by far the most significant.

### ADMINISTRATION

Exploitation of the State's fish resources is controlled by three Acts, the South Australian Fisheries Act, 1971-1977, the Commonwealth *Fisheries Act* 1952 and the *Continental Shelf (Living Natural Resources) Act* 1968.

Under the State Act, which is administered by the Department of Fisheries, provision is made for the licensing of fishermen and the registration of boats and gear. Control of fishing activity is maintained by licence limitations, the establishment of size limits, closed areas and closed seasons, the regulation of amount and type of gear, the prohibition of the use of explosive or noxious substances in any waters and the establishment of aquatic resources.

## FISHING VESSELS

A wide range of vessels operate in the various fisheries. Vessels exceeding 15 metres in length are engaged primarily in tuna poling and prawn trawling while the majority of vessels in the 9 metres to 15 metres range are used for rock lobster fishing. Abalone divers generally operate from small aluminium or fibreglass boats between 5 metres and 9 metres in length, but the majority of the smaller boats are engaged in the in-shore general scale fishery. Boats and equipment were valued at \$60.1 million in 1978-79.

Details of the number of boats engaged in commercial fishing activities are shown in the following table.

Fishing: Boats Engaged, South Australia

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
<b>Boats engaged:</b>					
Under 6 metres .....	1 150	1 000	1 077	1 226	1 351
6 metres and under 9 .....	327	292	307	292	315
9 metres and under 12 .....	162	167	178	168	168
12 metres and under 15 .....	108	109	116	116	114
15 metres and under 18 .....	39	42	46	49	50
18 metres and under 21 .....	19	22	23	23	23
21 metres and over .....	19	18	17	18	17
Total .....	1 824	1 650	1 764	1 892	2 038

## PRODUCTION

## Fish

The major marine species taken in South Australian waters are tuna, shark, Australian salmon, whiting, snapper and garfish. The catches of these and other significant commercial species are given in the following table.

Fish: Production by Species, South Australia  
Estimated Live Weight

Species	1974-75	1975-76	1976-77	1977-78	1978-79
'000 kg					
<b>Marine:</b>					
Australian salmon .....	873	680	1 099	1 169	450
Bream (black) .....	23	18	16	12	31
Garfish .....	487	463	354	318	341
Mullet .....	252	427	349	274	291
Mulloway .....	107	67	113	72	73
Ruff .....	211	227	284	354	249
Shark .....	459	1 546	944	1 055	1 087
Short finned pike .....	136	118	128	131	114
Snapper .....	284	307	333	385	342
Tuna .....	4 842	7 530	8 941	4 992	4 845
Whiting .....	977	991	796	831	794
Other marine species .....	155	133	323	346	163
Total .....	8 806	12 507	13 680	9 939	8 780

**Fish: Production by Species, South Australia  
Estimated Live Weight (*continued*)**

Species	1974-75	1975-76	1976-77	1977-78	1978-79
'000 kg					
Freshwater:					
Golden perch (callop) .....	190	188	119	74	111
Murray cod .....	4	5	3	6	9
Bony bream .....	58	51	65	82	136
European carp .....	166	325	266	207	437
Catfish .....	7	7	8	3	3
Other freshwater species .....	77	45	16	7	9
Total .....	502	621	476	379	705
<b>Total fish production .....</b>	<b>9 308</b>	<b>13 128</b>	<b>14 156</b>	<b>10 318</b>	<b>9 484</b>

Tuna are taken in the waters west and south of Eyre Peninsula and Kangaroo Island. Occasional catches are taken beyond the continental shelf. Although other methods have been attempted, the most successful technique to date for taking tuna is pole fishing with live bait. The use of spotting aircraft has increased the efficiency of fishing operations. Most tuna are landed at Port Lincoln or Streaky Bay although occasional landings have been made at Port Adelaide.

Shark fishing extends from the Victorian border in the east to Fowlers Bay in the far west. The main landing ports are the South East lobster ports, Port Adelaide, Port Lincoln and Streaky Bay. Shark are taken by long line and mesh netting.

Operators using purse-seine nets fish for salmon off lower Eyre Peninsula and around Kangaroo Island. Whiting are taken commercially in Spencer and St. Vincent Gulfs, Investigator Strait and the West Coast bays. In many areas hand lining continues to provide profitable catches as this fish attracts a high price. In other areas of the gulfs and the West Coast large quantities of whiting and garfish are taken using hauling nets. Of other species, mulloway and snapper are regarded highly as table fish. Mulloway are netted in the River Murray Mouth area and snapper are taken by hand and long line in most areas of the State, and by netting in shallower parts of the gulfs and West Coast bays.

Approximately 120 commercial fishermen are engaged in fishing on the River Murray and Lakes area. These are the only commercial source of fresh water fish in the State because of the general lack of permanent streams and lakes. The river has been sectioned into 'reaches' and 'reserves' and each commercial river fisherman is issued with a permit to fish a separate reach.

Gross value of production for 1978-79 of the major species are as follows:

	\$'000
Tuna .....	2 377
Whiting .....	2 717
Snapper .....	542
Garfish .....	659
Australian salmon .....	198
Shark .....	868
All other .....	607
	<hr/>
	7 968

**Crustaceans**

The prawn trawling is undertaken in Spencer and St Vincent Gulfs, Investigator Strait and on the West Coast of the State. Since 1975-76 it has been South Australia's most valuable single fishery.

**Prawn Production, South Australia**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
Estimated gross weight ('000 kg) .....	2 530	2 579	2 842	2 276	2 459
Value (\$'000) .....	3 795	7 762	9 513	6 313	11 511

Southern rock lobster are taken by pots from the shore to the edge of the continental shelf. The south-east coast between Kingston and the Victorian border is the main fishing area. Good catches are also taken from grounds around Kangaroo Island, near the Althorpe Islands and Port Lincoln, and along the West Coast.

**Rock Lobster Production, South Australia**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
Estimated gross weight ('000 kg) .....	1 862	2 228	1 906	1 912	1 920
Value (\$'000) .....	4 672	6 351	6 611	7 307	8 160

To prevent over exploitation, both the rock lobster and prawn fisheries are 'limited entry' fisheries with constraints being placed on the number and size of vessels that may fish and the type of gear that can be used.

**Molluscs**

Abalone is by far the most important mollusc taken in South Australia and is found in greatest numbers at depths of 12 to 30 metres on the extensive limestone bottom off the shores of western Eyre Peninsula. Smaller numbers are taken in Spencer Gulf, around Kangaroo Island and off the South East coast.

All abalone divers must hold a commercial fisherman's licence as well as a special abalone permit issued by the Department of Fisheries.

**Abalone Production, South Australia**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
Gross (in shell) weight ('000 kg) .....	608	616	675	770	843
Value (\$'000) .....	618	846	1 533	1 337	1 462

Squid and cuttlefish are taken in the general net fisheries and mainly sold for bait, although the domestic squid market for human consumption is increasing.

At present several private consortiums are interested in farming the Pacific oyster. This oyster was introduced into the State in September 1969 from Tasmania. Farms have been established in seawater ponds at Dry Creek, 28 kilometres north of Adelaide, at Coffin Bay and near Edithburgh. To date young oyster spat have been imported annually and grown to market size. The Dry Creek farm in February 1977 began marketing oysters and is currently developing a local oyster hatchery.

### MARKETING AND PROCESSING

Marketing and processing arrangements vary according to the species. Until recently tuna has been landed at Port Lincoln and then canned for local consumption or frozen for export. Following the closure of the Port Lincoln cannery in early 1979, large volumes of tuna have been road freighted to interstate canneries. Southern rock lobster are tailed and frozen for export at most of the main ports, but some are cooked for local consumption. Some prawns are cooked and sold locally but most are frozen and exported. Abalone are either canned or frozen for export. Shark are gutted and headed at sea and are frozen at the port of landing for interstate markets. Other fish are generally iced for dispatch to the Adelaide market or are scaled, filleted and frozen for general distribution.

All of the main landing ports have chilling or freezing facilities and many have processing plants. Several of these are operated by individual buyers or co-operatives but most are depots of the South Australian Fishermen's Co-operative Limited (SAFCOL). In addition to collecting, processing and distributing fish from the outports, SAFCOL also operates the Adelaide fish market. This is an auction market which handles fish for both members and non-members.

### RESEARCH

The realisation that research is essential for effective fisheries management has promoted several research programs. Scallop, rock lobster, shark and abalone resources are being investigated by joint Commonwealth and State Government research groups consisting of the Division of Fisheries and Oceanography of the Commonwealth Scientific and Industrial Research Organization (CSIRO), the Fisheries Division of the Commonwealth Department of Primary Industry, and the Fisheries Departments of New South Wales, Victoria, Tasmania and South Australia. In addition, the State Fisheries Department is conducting rock lobster, prawn, yabbie, blue crab, abalone, freshwater fish, squid, whiting, snapper and oyster research programs including tagging, stock sampling, and market measuring.

The State Government has financed exploratory deep-water trawling for gemfish in the South East and has purchased a twenty-three metre \$300 000 tuna pole boat for use as a fisheries research vessel in South Australian waters. This vessel, renamed the 'Joseph Verco' has assisted in studies of prawns, rock lobster, blue swimming crabs, scale fish and abalone.

A number of exploratory squid operations are being carried out in 1978-79 and 1979-80 on a joint venture basis by local processing companies and foreign vessel operators under the auspices of the Commonwealth, South Australian, Victorian and Tasmanian Governments. The aim is to establish the viability of a deep sea squid fishery off the South East coast of Australia.

To encourage fisheries research, the Commonwealth and State Governments established a joint fisheries Research and Development Fund in 1966 while the Commonwealth Government established the Fishing Industry Research Trust Account in 1969. The latter makes available from Commonwealth Government revenue an amount equal

to that collected from the fishing industry by the State fisheries authorities and is used to finance worthwhile research projects.

### Conservation

The importance of protecting the marine and freshwater environment against pollution and other man-caused degradation is recognised in Section 56 of the Fisheries Act, 1971-1977 which enables the Governor to make regulations for regulating or prohibiting the discharge, placing or flow into waters of any matter (whether solid, liquid or gaseous) declared by the regulations to be poisonous or injurious to fish or their spawn, and generally for protecting fish and the spawn against destruction or injury by the discharge, placing or flow of any such matter into waters.

The State Department of Fisheries has pioneered, in Australia, the concept of marine national parks and has created a number of aquatic reserves to protect seal colonies, mangrove communities and areas of scientific and educational interest. Mangrove communities and allied samphire flats have received particular attention because of their recently recognised contribution to the productivity of the near-shore marine environment. All mangroves in South Australia are fully protected.

## 9.3 MANUFACTURING

### DEVELOPMENT

Early factory production was oriented to local needs: thus brick kilns, flour mills, tanneries, distilleries and a candle and soap works were among factories recorded in the 1840s. Also in operation were the smaller establishments of saddlers and coachbuilders, while various food and clothing industries were being established. Heavy industry can probably be traced to the production of agricultural machinery, beginning with the stripper of 1843 and including the stump-jump plough of 1876.

The discovery of copper in 1842 provided an impetus to certain industrial activities but the finding of gold in Victoria in 1851 encouraged many skilled persons to leave South Australia and the Colony's infant industries did not fully recover for two decades.

A highlight in the industrial progress of the State was the establishment at Port Pirie in 1889 of smelters for the processing of silver-lead ore from Broken Hill. This was primarily responsible for building up of Port Pirie's population from about 900 at the 1881 Census to some 8 000 twenty years later, making the town at that time the largest country centre in South Australia.

Despite some industrial growth, South Australia in the 1930s was predominantly a primary producing State, but since then a rapid growth in the relative contribution of secondary industry to total production has taken place. Development in the 1930s coincided with Government action which reduced company taxation and wharfage charges, and provided for a program of low-cost housing. The needs of war provided a further stimulus to the industrialisation process during the 1940s but it is since the 1939-45 War that the most impressive development has taken place.

Extensive development has occurred particularly in the consumer durable industries (*e.g.* motor vehicles, electrical and household appliances) and these industries now employ a significant proportion of the State's labour force. Major improvements also have been made in the State's energy sources with the development of the Port Augusta and Torrens Island Power Stations and the Port Stanvac Oil Refinery, and the introduction of natural gas as a fuel.

## ASSISTANCE TO INDUSTRY

### Director of State Development

Assistance to firms contemplating location or expansion in South Australia is co-ordinated through the Director of State Development (within the Premier's Department), who ensures that potential investors receive speedy and co-ordinated service. The Director of State Development works in close co-operation with the various State Departments involved in development matters, including Marine and Harbors, Mines and Energy, Woods and Forests, and in particular with the Department of Trade and Industry.

### Department of Trade and Industry

The Department of Trade and Industry (formerly Department of Economic Development) is responsible for assisting in the formulation and implementation of Government policy on industrial and commercial development, with the objective of achieving a maximum sustainable level of employment by:

- (1) the development of existing industries; and
- (2) the attraction of new industries, especially to complement the existing industry structure.

The Department locates potential investors and negotiates to secure industrial development projects for the State. It also has the responsibility for promoting South Australia as a location for industrial and commercial developments, and, in conjunction with the Director of State Development, for promoting trade in goods, services and technology by South Australian industry. This includes the organisation of South Australian representation at appropriate trade fairs and exhibitions both interstate and overseas.

The Commercial Division of the Department incorporates the Small Business Advisory Unit, which provides a co-ordinated assistance service for small businesses by counsellng those with financial and other management problems. The Division also administers the Government's financial incentive schemes, advises industry on financial and mercantile matters, and undertakes viability studies of firms seeking financial and/or other assistance.

The Research and Planning Division is responsible for reviewing the impact of State Government development and decentralisation policies and Commonwealth Government policies on industry and especially to draw attention to constraints to industrial development. The Division also conducts studies of industry sectors to identify areas where structural change is needed or where there is scope for growth.

The South Australian Agent-General and his trade officers in London actively seek joint venture and manufacture under licence proposals, which are directed to local companies who have indicated an interest in diversifying their product range. The Department has representatives in Sydney, Tokyo, Hong Kong and Singapore to assist industry with trading and investment matters in those areas.

### South Australian Development Corporation

The South Australian Development Corporation, established under the Industries Development Act, 1941-1978, commenced operations in 1971-72.

The objectives of the Corporation are to promote and to develop the State's industries through the provision of financial assistance. The Corporation offers loans of up to \$1 million to eligible firms on specified terms and conditions. It can also participate in the equity structure of a firm and make grants where appropriate.

Before granting assistance to any person under the Act, the Corporation must satisfy the Treasurer:

- (1) that except in the case of assistance proposed to be granted in respect of an overseas industry, the assistance sought by the applicant is not obtainable by him in the ordinary course of business upon reasonable terms and conditions otherwise than from the Corporation;
- (2) that there is reasonable prospect that the industry in respect of which the assistance is given will be profitable; and
- (3) that it is in the public interest that the assistance be given.

#### Other Assistance

Other specific forms of financial assistance made available to industry by the State Government include payroll tax rebates, relocation grants, consultancy grants and assistance in the provision of services such as roads, water, electricity and transport. The South Australian Housing Trust makes serviced land available on industrial estates at cost, and may construct factories, either for sale or annual rental with option to purchase, throughout the State.

### MANUFACTURING INDUSTRY STATISTICS

For the year ended June 1969, the Censuses of Manufacturing and Electricity and Gas Establishments were conducted for the first time on an integrated basis with Censuses of Mining, Retail Trade and Selected Services, and Wholesale Trade. The electricity and gas industries, which were previously included in the Annual Factory Census, were the subject of separate censuses in 1968-69. As well as this change in the method of obtaining information on economic activities, different criteria have been used to define manufacturing and this has resulted in a significant fall in the number of establishments. In particular, service establishments such as dry cleaners and motor repair workshops are no longer classified as manufacturing. In addition to the changes in industry classification, information is now collected for all activities (including such things as installation work or wholesaling) undertaken by manufacturing establishments.

Thus, manufacturing industry statistics collected for the 1968-69 Census and subsequent censuses are not comparable with figures obtained from previous censuses. A more detailed explanation of these changes was included on pages 440-4 of the *South Australian Year Book 1972*.

Also, from 1974-75, detailed statistics have not been collected from single establishment enterprises employing fewer than four persons as their contribution to statistical aggregates other than the number of establishments is only marginal. In 1977-78 there were 818 establishments employing fewer than four persons.

### LEGISLATION

Industrial legislation is dealt with in Part 7 Labour. Other legislation is concerned with the location of factory premises and with the processes carried out therein.

Under the Local Government Act, 1934-1979, local government authorities may make by-laws restricting the erection of factory premises to certain sections of the area under their jurisdiction. The Manufacturing Industries Protection Act, 1937, provides for the proclamation of certain areas wherein proprietors and occupiers of factories are

protected against civil action for noise and vibration problems. This Act, which takes precedence over zoning by-laws, currently applies to four relatively small zones. Regulations made under the Noxious Trades Act, 1943-1965, have defined certain processes as noxious trades for which a licence must be obtained. In addition an area between Wingfield and Dry Creek in the outer northern suburbs has been declared a noxious trade area with persons operating therein being protected from civil action.

Similarly the licensing of noisy trades may be required under a section of the Local Government Act. Excessive noise from industrial premises is regulated under the Noise Control Act, 1976-1977. Protection against health hazards is provided under the Health Act, 1935-1978.

### CLASSIFICATION OF MANUFACTURING ESTABLISHMENTS

The Australian Standard Industrial Classification (ASIC) described in the publication *Australian Standard Industrial Classification, Volume 1* (Catalogue No. 1201.0) classifies the industries in the economy for statistical purposes, thus permitting the scope of the different economic censuses to be specified without gaps or overlapping between them.

As from the 1977-78 Census, statistics of manufacturing establishments are based on the 1978 Edition of the Classification.

In order to provide a link between past and future series a summary of operations table has been published in the bulletin *Manufacturing Establishments, Details of Operations by Industry Class* (Catalogue No. 8203.0) with data classified according to the 1969 Edition of ASIC. This bulletin also contains an explanation of the main changes in industrial classification at the ASIC sub-divisional level.

### STRUCTURE AND LOCATION OF SECONDARY INDUSTRY

Industrialisation since the 1939-45 War, to a considerable extent, has evolved around three major industrial groups. The motor vehicle, the electrical goods and the household appliance industries, together with their peripheral suppliers of components and services, have accounted for much of the post-war expansion. These industries are located in, or near Adelaide. In fact the tendency for manufacturing industries, particularly those supplying consumer goods, to congregate near their market, has resulted in a heavy concentration of South Australian secondary industries in or near Adelaide.

The following tables based on 1978 Edition of ASIC show this concentration of manufacturing activity in the Adelaide Statistical Division.

**Manufacturing Establishments: Summary of Operations, Adelaide Statistical Division and South Australia, 1977-78<sup>(a)</sup>**

Item	Unit	Adelaide Statistical Division	South Australia	ASD as percentage of SA
Number of establishments at 30 June	number	1 725	2 170	Per cent 79
Persons employed:				
Males .....	number	68 682	85 991	80
Females .....	number	20 326	24 035	85
Wages and salaries .....	\$'000	816 263	1 015 192	80
Turnover .....	\$'000	3 027 155	3 966 980	76
Value added .....	\$'000	1 323 671	1 672 200	79

(a) Excludes single establishment enterprises employing fewer than four persons.

**Manufacturing Establishments: Summary of Manufacturing Operations  
by Statistical Division, 1977-78<sup>(a)</sup>**

Statistical Division	Establishments at 30 June	Average Persons Employed	Wages and Salaries	Turnover	Value Added
Number					
Adelaide .....	1 725	89 008	816 263	3 027 155	1 323 671
Outer Adelaide .....	119	3 592	27 503	167 715	55 120
Yorke and Lower North .....	52	770	5 577	31 883	14 895
Murray Lands .....	85	2 652	23 199	138 920	46 670
South East .....	84	4 557	44 506	193 480	78 575
Eyre .....	32	850	6 918	35 927	10 798
Northern .....	73	8 597	91 225	371 900	142 470
Total State .....	2 170	110 026	1 015 192	3 966 980	1 672 200

(a) Excludes single establishment enterprises employing fewer than four persons.

A summary of manufacturing operations by industry subdivision within the Adelaide Statistical Division is detailed below and the distribution of activity between this Division and the rest of the State can be seen by comparing this and the subsequent table.

**Manufacturing Establishments: Summary of Operations by Industry Subdivision,  
Adelaide Statistical Division, 1977-78<sup>(a)</sup>**

Industry Subdivision	Establishments at 30 June	Average Persons Employed	Wages and Salaries	Turnover	Value Added
Number					
Food, beverages and tobacco .....	180	11 300	100 408	482 056	198 442
Textiles .....	33	n.a.	n.a.	n.a.	n.a.
Clothing and footwear .....	70	n.a.	n.a.	n.a.	n.a.
Wood, wood products and furniture .....	271	6 075	48 059	190 827	76 752
Paper, paper products, printing and publishing .....	149	5 869	54 913	177 724	100 712
Chemical, petroleum and coal products .....	45	n.a.	n.a.	n.a.	n.a.
Non-metallic mineral products .....	100	3 613	37 807	170 952	83 026
Basic metal products .....	36	n.a.	n.a.	n.a.	n.a.
Fabricated metal products .....	305	8 080	68 812	283 213	124 668
Transport equipment .....	106	n.a.	n.a.	n.a.	n.a.
Other machinery and equipment .....	266	16 503	149 335	471 000	235 723
Miscellaneous manufacturing .....	164	5 503	49 261	176 072	88 648
Total manufacturing .....	1 725	89 008	816 263	3 027 155	1 323 671

(a) Excludes single establishment enterprises employing fewer than four persons.

Generally, industrial plants outside the Adelaide Statistical Division are located near raw materials sources of supply. At country centres there are either meat slaughtering, dairy produce or fish processing factories processing regional produce for local and export markets. There are exceptions to this, including the production of agricultural machinery at Mannum, woollen mills at Lobethal, clothing production at Mount Gambier and heavy engineering at Whyalla. Wallaroo and Port Lincoln, being central to their markets, are the sites of chemical fertiliser production.

The two most important undertakings beyond the vicinity of Adelaide are the iron and steel complex at Whyalla and the lead smelters at Port Pirie. These undertakings together with the power station at Port Augusta are sited for important mineral sources. Other factories are located near sources of primary products—these include the sawmills and paper pulp industries of the South East, the fruit processing plants of the Riverland, the wineries and distilleries of the Barossa Valley and the Riverland, and various dairy produce factories and fish processing plants.

In the following table details of manufacturing establishments for 1977-78 are classified according to industry subdivision.

**Manufacturing Establishments: Summary of Operations by Industry Subdivision  
South Australia, 1977-78<sup>(a)</sup>**

Industry Subdivision	Establishments at 30 June	Average Persons Employed	Wages and Salaries	Turnover	Value Added
Number					
Food, beverages and tobacco .....	383	18 222	155 404	829 948	315 405
Textiles .....	35	2 492	23 084	96 709	35 664
Clothing and footwear .....	73	3 624	28 639	83 710	46 931
Wood, wood products and furniture .....	318	8 484	70 185	279 465	112 519
Paper, paper products, printing and publishing .....	187	7 269	70 774	243 078	128 602
Chemical, petroleum and coal products .....	50	2 803	31 551	156 538	62 397
Non-metallic mineral products .....	145	4 099	42 644	198 642	94 677
Basic metal products .....	40	9 174	96 667	428 227	148 151
Fabricated metal products .....	353	8 795	74 663	307 677	136 608
Transport equipment .....	121	22 227	215 445	671 466	257 332
Other machinery and equipment .....	293	17 105	154 886	485 603	242 756
Miscellaneous manufacturing .....	172	5 732	51 251	185 915	91 157
Total manufacturing .....	2 170	110 026	1 015 192	3 966 980	1 672 200

(a) Excludes single establishment enterprises employing fewer than four persons.

Transport equipment accounted for 15 per cent of value added while fabricated metal products, machinery and equipment etc., accounted for 23 per cent. Employment in these industries was 20 per cent and 24 per cent respectively of the total manufacturing employment. Also of considerable importance to South Australia are the food and drink industries (19 per cent of value added, 17 per cent of employment) particularly milk processing and winemaking.

The importance of manufacturing industry in South Australia relative to Australia as a whole can be gauged from the following comparison.

**Manufacturing Establishments: Summary of Operations, South Australia and Australia 1977-78<sup>(a)</sup>**

Item	Unit	South Australia	Australia	South Australia as a percentage of Australia
Number of establishments at 30 June .....	number	2 170	26 065	Per cent
Average employment:				
Males .....	number	85 991	854 176	10.1
Females .....	number	24 035	290 373	8.3
Wages and salaries .....	\$'000	1 015 192	11 137 631	9.1
Turnover .....	\$'000	3 966 980	48 097 371	8.2
Stocks, closing .....	\$'000	856 850	8 500 475	10.1
Value added .....	\$'000	1 672 200	20 236 257	8.3
Fixed capital expenditure .....	\$'000	171 974	1 879 386	9.2

(a) Excludes single establishment enterprises employing fewer than four persons.

Although there were 2 170 establishments operating at 30 June 1978 only 203 or 9.4 per cent had an employment in excess of 100 persons while 958 establishments, or 44.1 per cent of the total, employed less than 10 persons. The 31 largest establishments employed 38 125 persons or 36.6 per cent of the total.

In the following table manufacturing establishments are grouped according to the number of persons employed.

**Manufacturing Establishments: Selected Variables by Size of Establishment  
South Australia, 30 June 1978<sup>(a)</sup>**

Size of Establishment (Average Employment)	Establish- ments	Persons Employed	Turnover	Value Added
Number				\$'000
Fewer than 10 .....	958	5 455	176 103	75 094
10 but fewer than 20 .....	439	5 860	208 429	91 344
20 but fewer than 50 .....	404	12 039	488 492	204 391
50 but fewer than 100 .....	166	11 392	499 227	206 909
100 but fewer than 200 .....	122	16 610	660 959	276 286
200 but fewer than 500 .....	50	14 734	587 928	258 171
500 or more .....	31	38 125	1 330 481	555 501

(a) Excludes single establishment enterprises employing fewer than four persons.

Details of persons employed and distribution of employment in manufacturing establishments for 1977-78 are given in the following tables. Females constituted 21.8 per cent of the total employment, but industries traditionally associated with female employment had a much higher component; textiles, clothing and footwear industries, in particular, employ a large number of females.

**Manufacturing Establishments: Average Number of Persons Employed, South Australia  
1977-78<sup>(a)</sup>**

Industry Subdivision	Males	Females	Total	Percentage of Total Employment
Food, beverages and tobacco .....	12 777	5 445	18 222	16.6
Textiles .....	1 458	1 034	2 492	2.3
Clothing and footwear .....	1 008	2 616	3 624	3.3
Wood, wood products and furniture .....	7 258	1 226	8 484	7.7
Paper, paper products, printing and publishing .....	5 378	1 891	7 269	6.6
Chemical, petroleum and coal products .....	2 328	475	2 803	2.5
Non-metallic mineral products .....	3 746	353	4 099	3.7
Basic metal products .....	8 438	736	9 174	8.3
Fabricated metal products .....	7 108	1 687	8 795	8.0
Transport equipment .....	20 158	2 069	22 227	20.2
Other machinery and equipment .....	12 464	4 641	17 105	15.5
Miscellaneous manufacturing .....	3 870	1 862	5 732	5.2
Total manufacturing .....	85 991	24 035	110 026	100.0

(a) Excludes single establishments employing fewer than four persons.

**Manufacturing Establishments: Average Number of Persons Employed by Type of  
Employment, South Australia, 1977-78<sup>(a)</sup>**

Industry Subdivision	Working Proprietors	Employees	Total
Food, beverages and tobacco .....	198	16 849	17 047
Textiles .....	7	2 520	2 527

**Manufacturing Establishments: Average Number of Persons Employed by Type of Employment, South Australia, 1977-78<sup>(a)</sup> (continued)**

Industry Subdivision	Working Proprietors	Employees	Total
Clothing and footwear .....	38	3 567	3 605
Wood, wood products and furniture .....	246	7 828	8 074
Paper, paper products, printing and publishing .....	113	7 114	7 227
Chemical, petroleum and coal products .....	..	2 801	2 801
Non-metallic mineral products .....	21	3 941	3 962
Basic metal products .....	8	9 220	9 228
Fabricated metal products .....	202	8 376	8 578
Transport equipment .....	49	20 504	20 553
Other machinery and equipment .....	89	16 388	16 477
Miscellaneous manufacturing .....	92	5 679	5 771
Total manufacturing .....	1 063	104 787	105 850

(a) Excludes single establishment enterprises employing fewer than four persons.

### WAGES AND SALARIES

The following table shows wages and salaries paid classified by industry subdivision and based on 1978 Edition of ASIC. Wages and salaries paid to administrative, office, sales and distribution employees were 29 per cent of total wages paid, but in the food, beverages and tobacco; paper and paper products, printing and chemical, petroleum and coal products industries a much higher component was paid to these employees.

**Manufacturing Establishments: Wages and Salaries, South Australia, 1977-78<sup>(a)</sup>**

Industry Subdivision	Wages and Salaries paid to		
	Administrative, Office, Sales and Distribution Employees	Production and All Other Workers	All Employees
		\$'000	
Food, beverages and tobacco .....	51 269	104 134	155 404
Textiles .....	5 076	18 008	23 084
Clothing and footwear .....	6 376	22 263	28 639
Wood, wood products and furniture .....	18 018	52 167	70 185
Paper, paper products, printing and publishing .....	26 716	44 058	70 774
Chemical, petroleum and coal products .....	12 575	18 976	31 551
Non-metallic mineral products .....	11 664	30 980	42 644
Basic metal products .....	30 243	66 425	96 667
Fabricated metal products .....	24 535	50 127	74 663
Transport equipment .....	52 827	162 618	215 445
Other machinery and equipment .....	43 735	111 151	154 886
Miscellaneous manufacturing .....	11 812	39 439	51 251
Total manufacturing .....	294 847	720 346	1 015 192

(a) Excludes single establishment enterprises employing fewer than four persons.

## SELECTED FACTORY PRODUCTS

The factory products listed in this section are not necessarily the principal items produced in this State. Where publication of details of an individual product would enable the output of a particular manufacturer to be determined, these figures are treated as confidential and are not separately available for publication. As a considerable number of products are produced in this State by industries containing one or two dominant firms, the list of publishable items is considerably restricted.

Selected Articles Produced: South Australia, 1976-77 and 1977-78<sup>(a)</sup>

Item	Units of Quantity	1976-77			1977-78		
		Production		Sales and Transfers	Production		Sales and Transfers
		Quantity	Value	Quantity	Value	Quantity	Value
Aerated and carbonated waters	'000 l	110 918	110 964	\$'000 35 124	109 275	109 429	\$'000 32 346
Barrels, kegs, vats, drums and tanks	..	..	..	6 267	..	..	5 804
Blinds and awnings:							
Metal venetian	..	..	..	659	..	..	749
Outdoor, canvas	..	..	..	1 443	..	..	1 882
Outdoor metal	..	..	..	1 932	..	..	1 249
Brandy	'000 l al	1 943	2 088	4 476	2 582	2 178	5 390
Bread, total value				36 628			40 065
Bricks, clay	'000	171 782	166 165	18 794	161 971	153 062	19 445
Cakes, pastry, pies and puddings (not canned)	..	..	..	27 821	..	..	30 717
Cheese (excluding processed cheese)	'000 kg	15 487	15 060	n.a.	15 363	15 761	n.a.
Cheese, total value				15 691			17 586
Chickens	'000 kg	19 535	19 770	26 306	21 694	21 182	30 818
Flour, white	tonnes	89 644	95 073	15 853	89 160	90 321	16 057
Fluorescent light fittings	..	..	..	4 963	..	..	7 187
Fruit, crystallised and glace	'000 kg	969	907	1 902	1 108	926	2 223
Furniture:							
Sheet metal	..	..	..	9 899	..	..	9 956
Wooden	..	..	..	39 536	..	..	41 852
Gloves, work	doz.	27 350	28 007	551	24 779	32 005	586
Ice	tonnes	12 792	12 792	389	14 106	14 106	501
Ice cream	'000 l	15 482	15 662	6 865	11 588	11 935	5 594
Machinery:							
Conveyors, appliances and parts	..	..	..	4 733	..	..	6 077
Hoists, cranes lifting machinery	..	..	..	2 033	..	..	2 293
Mining and drilling	..	..	..	1 644	..	..	7 546
Pumping	..	..	..	4 828	..	..	5 583
Mattresses, innerspring	number	59 118	59 507	2 582	59 090	58 637	3 365
Milk, liquid whole, packed	'000 l	..	143 959	30 516	..	96 270	24 678
Newspapers and periodicals printed and published	..	..	..	14 384	..	..	17 238
Paints:							
Architectural and decorative:							
Primers and undercoats	'000 l	677	672	1 196	661	643	1 171
Finishing coats	'000 l	4 336	4 274	7 267	3 623	3 680	6 816
Ready-mixed concrete	m <sup>3</sup>	1 155 071	1 155 071	38 565	1 078 295	1 078 295	38 095
Smallgoods	..	..	..	15 817	..	..	16 798
Steel, fabricated constructional	tonnes	42 881	42 066	20 712	39 690	37 503	26 636
Tallow, inedible	'000 kg	25 819	26 880	7 640	27 150	27 658	9 278
Tarpaulins	..	..	..	526	..	..	478
Tents, flies and marquees	..	..	..	963	..	..	739
Window frames, aluminium	..	..	..	14 957	..	..	12 921
Wine:							
Fortified	'000 l	35 344	45 631	36 404	24 949	35 354	30 885
Unfortified	'000 l	115 634	103 606	73 801	113 904	110 433	89 115

(a) Includes details for Northern Territory.

### INDIVIDUAL INDUSTRIES

In this section details are given of major South Australian secondary industries. However, statistics relating to a number of important industries are not published in order to maintain confidentiality of details for individual businesses. The classification used is based on 1978 Edition of ASIC.

#### **Meat and Abattoir By-products**

Most of the abattoirs in South Australia are located in country areas but the two largest establishments are within the Adelaide Statistical Division. Details of country butchers who slaughter livestock mainly for sale in their own retail shops are not included.

**Meat and Abattoir By-products, South Australia, 1977-78<sup>(a)</sup>**

Statistical Division	Establishments	Persons Employed	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
Number						
Adelaide .....	13	2 373	21 296	51 746	87 159	37 626
Other .....	17	1 546	12 975	40 839	60 599	20 707
Total .....	30	3 919	34 271	92 585	147 759	58 333

(a) Excludes single establishment enterprises employing fewer than four persons.

#### **Wood and Wood Products**

The major activities in this sector of manufacturing are log sawmilling, resawn and dressed timber and joinery and wooden structural fittings industries. In 1977-78 wood and wood products industries accounted for 5.4 per cent of manufacturing employment in South Australia.

**Wood and Wood Products, South Australia, 1977-78<sup>(a)</sup>**

Statistical Division	Establishments	Persons Employed	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
Number						
Adelaide .....	161	3 658	30 454	79 111	130 353	48 202
Other .....	44	2 306	21 239	53 956	85 626	33 764
Total .....	205	5 964	51 694	133 067	215 980	81 966

(a) Excludes single establishment enterprises employing fewer than four persons.

#### **Printing and Allied Industries**

There are two large establishments producing newspapers in Adelaide. Newspaper printing offices are also located in most large towns, and a number of these produce newspapers for more than one locality. Particulars of general printing establishments, including the activities of the Government Printing Division of the Department of Services and Supply, are also incorporated in the following table.

**Printing and Allied Industries, South Australia, 1977-78<sup>(a)</sup>**

Statistical Division	Establishments	Persons Employed	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
Number						
Adelaide .....	131	4 818	45 355	49 465	132 162	83 200
Other .....	33	389	2 911	1 953	7 190	5 247
Total .....	164	5 207	48 266	51 418	139 351	88 447

(a) Excludes single establishment enterprises employing fewer than four persons.

### Cement and Concrete Products

There are two firms producing cement at three locations in South Australia. One firm produces cement at two locations, one at Birkenhead and the other at Angaston. The Angaston cement plant, based on the limestone deposits, is an example of a manufacturing location being established near the source of the raw material. In 1977-78, 51 plants produced ready-mixed concrete, of which 27 were in the Adelaide Statistical Division and 24 were in country areas. Two firms produce concrete pipes at five separate locations of which two are in the country.

**Cement and Concrete Products, South Australia, 1977-78<sup>(a)</sup>**

Statistical Divisions	Establishments	Persons Employed	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
Number						
Adelaide .....	56	1 441	15 841	51 077	85 626	34 883
Other .....	34	368	4 058	15 251	25 684	10 533
Total .....	90	1 809	19 898	66 328	111 310	45 416

(a) Excludes single establishment enterprises employing fewer than four persons.

### Basic Iron and Steel

In 1941 a blast furnace was installed at Whyalla to utilise the iron ore from the Middleback Ranges. The ore is transported by rail a distance of 55 kilometres to Whyalla. Before 1965 Whyalla was the major source of Australia's foundry iron but this changed in 1965 when the Basic Oxygen Steelmaking plant began producing steel.

There are a number of large pipe and tube making firms located in and near Adelaide. These firms accounted for slightly less than 22 per cent of the Australian output of ferrous pipes, tubes and fittings. Details for these plants, together with details for establishments making basic forgings and castings of iron and steel, are included in the following table.

**Basic Iron and Steel, South Australia, 1977-78<sup>(a)</sup>**

Statistical Division	Establishments	Persons Employed	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
Number						
Adelaide .....	21	n.a.	n.a.	n.a.	n.a.	n.a.
Other .....	3	n.a.	n.a.	n.a.	n.a.	n.a.
Total .....	24	6 921	70 739	173 547	266 861	94 857

(a) Excludes single establishments enterprises employing fewer than four persons.

### Transport Equipment (Motor Vehicles and Parts)

The largest single industry in South Australia and a major contributor to industrial growth since 1945 is the motor vehicle industry. However, as there are only a few firms engaged in motor vehicle production, no detailed figures are published for confidentiality reasons.

Immediately after the 1939-45 War, General Motors-Holden Pty Ltd prepared for the production of an Australian-built car, and volume production commenced in 1948. A number of major increases in productive capacity have been made by this firm involving not only considerable expansion at the Woodville site but also the establishment of a plant at Elizabeth.

Tonsley Park has become the centre of manufacturing operations for Chrysler Australia Ltd and in July 1967 the company expanded its operations to include a large foundry and engine plant at Lonsdale, near Port Stanvac.

These large motor vehicle plants in turn absorb the products of many establishments producing vehicle components. Other manufacturers produce omnibus and commercial vehicle bodies, fork lift trucks, garage equipment, trailers, caravans, and a wide range of vehicle accessories.

In 1977-78 establishments mainly engaged in the manufacture of motor vehicles and parts contributed 17 per cent of South Australia's total employment in manufacturing. It should be noted that this figure understates the importance of the motor vehicle industry to South Australia as some firms involved in the manufacture of components and accessories are classified to other industries. (For example, firms making rubber components for the motor industry are considered to be in the rubber industry.)

#### Transport Equipment (Motor Vehicles and Parts), South Australia, 1977-78<sup>(a)</sup>

Statistical Division	Establishments	Persons Employed	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
Number						
Adelaide .....	78	18 361	178 169	398 438	589 701	206 247
Other .....	4	31	150	298	558	245
Total .....	82	18 392	178 319	398 736	590 259	206 493

(a) Excludes single establishment enterprises employing fewer than four persons.

#### Transport Equipment (Other than Motor Vehicles)

In 1977-78 the transport equipment (other than motor vehicles) industries accounted for 3 per cent of the employment in manufacturing in South Australia.

#### Transport Equipment (Other than Motor Vehicles), South Australia, 1977-78<sup>(a)</sup>

Statistical Division	Establishments	Persons Employed	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
Number						
Adelaide .....	28	2 136	18 944	17 476	40 863	23 112
Other .....	11	1 699	18 181	12 334	40 344	27 727
Total .....	39	3 835	37 126	29 810	81 207	50 839

(a) Excludes single establishment enterprises employing fewer than four persons.

Motor vehicles and parts and other transport equipment together accounted for 20 per cent of total South Australian manufacturing employment.

#### Appliances and Electrical Equipment

For many years South Australia has been one of the leading States in the production of the larger household appliances, including refrigerators, washing machines and stoves. These items constitute a significant part of the total activity shown in the next table. Also represented are manufacturers of radio and television components, water-heating systems, batteries and other electrical machinery and equipment.

This group of industries is the second most important in the State and in 1977-78 employed nearly 10 per cent of total manufacturing employment in South Australia.

**Appliances and Electrical Equipment, South Australia, 1977-78<sup>(a)</sup>**

Statistical Division	Establishments	Persons Employed	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
		Number		\$'000		
Adelaide .....	88	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Other .....	3	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Total	91	10 791	96 040	171 393	312 275	147 860

(a) Excludes single establishment enterprises employing fewer than four persons.

**Further References**

Additional information may be found in the following publications:

**South Australian Office**

- 8202.4 *Manufacturing Establishments: Details of Operations*
- 8203.4 *Manufacturing Establishments: Small Area Statistics*
- 8204.4 *Manufacturing Establishments: Selected Items of Data Classified by Industry and Employment Size*

**Central Office**

- 8202.0 *Manufacturing Establishments, Summary of Operations by Industry Class*
- 8203.0 *Manufacturing Establishments, Details of Operations by Industry Class*
- 8204.0 *Manufacturing Establishments: Selected Items of Data Classified by Industry and Employment Size, Australia*

**PART 10**

**COMMERCE**

**10.1 INTERNAL TRADE**

Extensive statistics of retail trade have been collected and published over many years but the first full census of wholesale trade was conducted as part of the integrated Economic Censuses of 1968-69 which was discussed in detail on pages 446-57 of the *South Australian Year Book 1971*.

**RETAIL TRADE**

A Census of Retail Establishments and Selected Service Establishments for the year ended 30 June 1974 was conducted primarily to provide the necessary data to update the sample for the quarterly survey of retail sales. The census included all establishments classified to retail trade in Subdivision 48 of the Australian Standard Industrial Classification (ASIC) with the exception of bread and milk vendors, footwear repairers and door to door salesmen. In addition the census included service establishments classified as cafes and restaurants; licensed hotels, motels and wine saloons; licensed clubs and hairdressers and beauty salons.

The definition of retail trade adopted in the 1973-74 Retail Census was the same as that used in previous censuses *i.e.* the sale of new and used goods to the final consumer for household and personal purposes.

For further information and detailed tables relating to the 1973-74 Retail Census, reference should be made to the *South Australian Year Book 1978*, pages 457-9 and the bulletin *Census of Retail Establishments and Selected Service Establishments, 1973-74* (Catalogue No. 8601.4).

**Retail and Selected Service Establishments: Summary of Operations  
by Industry Group, South Australia, 1973-74**

Industry Group	Establish- ments at End of June	Employment at End of June		Wages and Salaries	Retail Sales	Turnover (a)
		Males	Females			
<b>Retail establishments:</b>						Number
Department, variety and general stores	221	4 031	9 539	41 345	265 836	278 172
Food stores	4 263	8 349	12 584	35 367	445 255	450 206
Clothing, fabric and furniture stores	1 397	2 651	4 066	17 755	151 385	153 143
Household appliance and hardware stores	823	2 458	1 618	13 226	93 547	113 980
Motor vehicle dealers, petrol and tyre retailers	2 648	14 563	3 845	60 610	460 663	605 582
Other retailers	1 838	2 716	3 850	13 834	109 358	112 676
Total retail establishments ...	11 190	34 768	35 502	182 137	1 526 044	1 713 759
<b>Selected Service establishments:</b>						\$'000
Restaurants and licensed hotels	881	5 948	8 178	39 043	117 934	169 640
Licensed clubs	161	849	650	3 656	9 521	13 486
Hairdressing and beauty salons	948	510	2 435	4 414	907	11 787
Total selected service establish- ments .....	1 990	7 307	11 263	47 113	128 362	194 913
Total retail and selected service establish- ments .....	13 180	42 075	46 765	229 250	1 654 406	1 908 672

(a) Sales of goods (retail and wholesale) and other operating revenue.

A comparison of retail trading in South Australia and in Australia during 1973-74 is shown in the following table. In this and in the earlier table showing employment and wages, employment figures include working proprietors but wages exclude the drawings of working proprietors.

**Retail and Selected Service Establishments: South Australia and Australia, 1973-74**

Particulars	South Australia	Australia
Establishments operating at 30 June 1974 .....	13 180	151 120
Persons employed at 30 June 1974 .....	88 840	984 964
	\$ million	
Wages and salaries .....	229.3	2 739.0
Retail sales .....	1 654.4	19 070.7
Wholesale sales .....	84.2	1 403.2
Other operating revenue .....	170.1	2 259.8
Turnover .....	1 908.7	22 733.7

The value of sales of the commodity items collected in the 1973-74 Census are shown in the following table. Many establishments reported takings in more than one commodity item so that the number of establishments showing sales for individual items will exceed the total number of retail and selected service establishments.

**Retail and Selected Service Establishments: Sales by Commodity Group  
South Australia 1973-74**

Commodity Item	Number of Establishments	Retail Sales of Goods		
		\$'000	Sales Per Establishment	Sales Per Head of Population
Groceries, other food items, etc.:				
Groceries .....	2 802	192 949	68 860	159.4
Fresh meat .....	1 163	80 819	69 490	66.7
Confectionery, ice cream, soft drinks, etc.	3 516	50 154	14 260	41.4
Other food .....	3 006	79 966	26 600	66.0
Beer, wine and spirits, cigarettes, etc.:				
Beer, wine and spirits .....	1 033	127 317	123 250	105.2
Cigarettes and other tobacco products ....	4 827	50 218	10 400	41.5
Fabrics, clothing and footwear:				
Clothing and drapery .....	1 733	200 292	115 580	165.4
Footwear .....	763	33 575	44 000	27.7
Hardware:				
Domestic hardware, china, glassware, jewellery, watches and clocks (including garden equipment) .....	1 453	48 084	33 090	39.7
Household appliances:				
Radios, radiograms, tape recorders, television sets and accessories, musical instruments, records, sheet music, etc.	580	39 072	67 370	32.3
Domestic refrigerators and freezers, washing machines, stoves, household heating appliances and other household appliances (including bottled liquid petroleum gas) .....	543	56 384	103 840	46.6
Furniture and floor coverings:				
Furniture, mattresses, blinds, etc. (including installation and repairs) .....	364	45 609	125 300	37.7
Floor coverings, carpets, lino, etc., (including laying of floor coverings) ....	354	32 754	92 530	27.1
Motor vehicles, petrol, boats, caravans, etc.:				
New motor vehicles, new and used motor cycles, boats and caravans .....	486	193 634	398 424	159.9
Used motor vehicles .....	572	113 443	198 327	93.7
New and used parts and accessories, petrol, oils, tyres, batteries, etc. ....	1 970	150 857	76 577	124.6
Miscellaneous:				
Cosmetics, perfumes, toilet preparations	1 774	24 129	13 600	19.9
Prescription and patent medicines and therapeutic appliances .....	836	35 387	42 330	29.2
Books, stationery, newspapers, etc. ....	1 735	37 737	21 750	31.2
Goods not included above .....	2 191	62 022	28 310	51.2
Total retail sales .....	..	1 654 406	..	1 366.4

A Census of Retail and Selected Service Establishments, which is being conducted for the year ended 30 June 1980, will meet many important requirements for detailed up-to-date information about the retail sector of the economy and will also provide essential data necessary for continuation of the sample surveys of retail establishments.

#### Surveys of Retail Establishments

During periods between censuses, estimates of the value of retail sales are calculated from returns received from a sample of retail establishments covering businesses which account for approximately 45 per cent of all retail sales in Australia.

The following table shows the value of retail sales of goods in South Australia in broad commodity groups for the 1973-74 Census, and retail survey estimates for the years 1976-77 to 1978-79. Retail sales of motor vehicles and parts, petrol, etc., and of delivered milk and bread are excluded.

## Value of Retail Sales: Commodity Groups, South Australia

Commodity Group	Value of Retail Sales of Goods			
	1973-74	1976-77	1977-78	1978-79
Groceries .....	192.9	354.5	405.5	447.2
Butchers meat .....	80.8	116.1	128.0	141.5
Other food .....	130.1	209.1	226.5	251.1
Total food and groceries	403.9	679.7	760.0	839.8
Beer, wine and spirits .....	127.3	214.9	229.0	255.8
Clothing, drapery, etc. .....	200.3	319.6	337.5	359.8
Footwear .....	33.6	51.8	57.9	63.3
Hardware, china, etc. .....	48.1	79.6	86.4	96.3
Electrical goods .....	95.5	204.4	185.8	192.5
Furniture and floor coverings .....	78.4	128.2	125.8	129.8
Chemist goods .....	59.5	96.4	106.7	111.6
Newspapers, books and stationery .....	37.7	68.1	76.6	84.8
Other goods .....	112.2	182.7	193.2	208.6
Total .....	1 196.5	2 025.4	2 158.9	2 342.3

## WHOLESALE TRADE

The term wholesale trade was used in the wholesale census in the broad sense to include the resale (by agents or principals) of new or used goods to retailers or other wholesalers or to institutional (including government), professional or other business users (including farmers and builders). The more important types of business engaged in wholesale trade are wholesale merchants, who take title to the goods they sell; manufacturers sales branches; commission agents, including import and export agents and purchasing agents; petroleum products distributors; and co-operative and marketing boards engaged in marketing farm products.

## Wholesale Establishments: South Australia and Australia, 1968-69

Particulars	South Australia	Australia
Establishments operating at 30 June 1969 .....	3 159	33 356
Persons employed (a) .....	32 462	358 811
Wages and salaries .....	\$ million	
Sales on own account, transfers out, commissions received and other operating revenue .....	87.0	1 045.3
Stocks at 30 June:		
1968 .....	1 226.9	15 899.1
1969 .....	135.8	1 945.5
Purchases, transfers in and selected expenses .....	144.9	2 343.4
Value added (b) .....	1 006.7	13 524.0
	229.3	2 773.0

(a) At end of June 1969; includes working proprietors. (b) Sales on own account, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

## TOURIST ACCOMMODATION

The importance of tourism is recognised by a wide cross section of the community and this has caused a demand for comprehensive statistics on the industry. To satisfy requests from various organisations expressing a need for statistics on tourism the Bureau conducted a Census of Tourist Accommodation Establishments for the year ended 30 June 1974 to identify and measure the amount, type and location of accommodation available.

The census covered establishments classified as hotels, motels and guest houses providing predominantly short-term accommodation (for periods of less than two months) to the general public. Caravan parks were also included. Establishments which had nil takings from accommodation, or in which the number of short-term guests was less than long-term guests, were excluded.

Census of Tourist Accommodation: South Australia, 1973-74

Size of Establishment (Guest Rooms)	Establishments	Guest Rooms		Employment at End of June		Wages and Salaries	Takings from Accommodation	
		With all Facilities	Other	Full-time	Other			
Number								
				LICENSED HOTELS		\$'000		
1-15 .....	367	500	2 243	2 343	3 101	15 646	1 914	
16-25 .....	56	314	772	594	659	4 103	1 196	
26 and over .....	40	1 344	506	823	928	6 042	3 937	
Total .....	463	2 158	3 521	3 760	4 688	25 791	7 047	
				LICENSED MOTELS				
1-15 .....	7	71	7	20	29	72	158	
16-25 .....	15	275	34	55	131	385	710	
26 and over .....	37	1 680	36	657	497	3 529	6 699	
Total .....	59	2 026	77	732	657	3 986	7 567	
				UNLICENSED MOTELS				
1-15 .....	36	373	—	77	74	141	712	
16-25 .....	17	323	8	50	72	272	771	
26 and over .....	16	548	47	71	133	533	1 631	
Total .....	69	1 244	55	198	279	946	3 114	
				PRIVATE HOTELS AND GUEST HOUSES				
1-15 .....	22	29	169	38	30	56	161	
16-25 .....	6	—	116	10	5	11	69	
26 and over .....	8	26	389	35	42	207	432	
Total .....	36	55	674	83	77	274	662	
				TOTAL ESTABLISHMENTS				
1-15 .....	432	973	2 419	2 478	3 234	15 916	2 946	
16-25 .....	94	912	930	709	867	4 772	2 746	
26 and over .....	101	3 598	978	1 586	1 600	10 310	12 698	
Total .....	627	5 483	4 327	4 773	5 701	30 998	18 390	

In addition to type of establishment and type of guest, information was sought on the capacity of accommodation with and without facilities, i.e. rooms with private bath/shower and toilet, employment, wages, takings from accommodation, meals and liquor sales. Details collected for caravan parks included the number of sites, on-site vans and cabins. The various items of data were tabulated for regions within the State and information for some items, depending on the number of establishments operating, is available for individual local government areas.

To support the census information, a series of tourist accommodation surveys was introduced in September quarter 1975 to provide an indication of the utilisation of

accommodation available by measuring occupancy rates. The surveys include establishments which provide accommodation predominantly to short-term visitors and calculates occupancy rates as the proportion of guest rooms or sites occupied to the number of rooms or sites available for accommodating paying guests. Establishments in the surveys are grouped into three categories—licensed hotels with facilities *i.e.* bath or shower and toilet in most guest rooms; licensed or unlicensed motels, private hotels or guest houses with facilities; and caravan parks with powered sites for caravans, and toilet, shower and laundry facilities available for guests. Caravan parks were included in the surveys from the September quarter 1977. Excluded at that time were licensed hotels, private hotels and guest houses without facilities.

The number of establishments identified in the survey varies slightly according to services and facilities provided, but 108 licensed hotels with facilities, 143 motels and 156 caravan parks were included in June 1979. The following table shows occupancy rates and takings from accommodation from June quarter 1978 to June quarter 1979.

#### Tourist Accommodation Survey, South Australia

Particulars	Unit	Quarter				
		June 1978	Sept. 1978	Dec. 1978	Mar. 1979	June 1979
LICENSED HOTELS WITH FACILITIES						
Room occupancy rate .....	%	46.5	47.4	46.3	49.0	46.7
Takings .....	\$'000	2 232	2 372	2 296	2 607	2 543
MOTELS ETC. WITH FACILITIES						
Room occupancy rate .....	%	57.8	55.5	56.1	64.4	57.8
Takings .....	\$'000	4 266	4 336	4 537	5 378	4 969
CARAVAN PARKS						
Site occupancy rate .....	%	15.3	12.3	17.5	26.3	17.3
Takings .....	\$'000	982	835	1 289	1 790	1 249

Information on Accommodation Establishments is being collected in conjunction with the Census of Retail and Selected Service Establishments for the year ended 30 June 1980.

#### Further References

Additional information may be found in the following publications:

#### South Australian Office

- 8601.4 *Census of Retail Establishments and Selected Service Establishments*
- 8602.4 *Census of Wholesale Establishments*
- 8603.4 *Tourist Accommodation Survey*
- 8604.4 *Census of Tourist Accommodation Statistics*

#### Central Office

- 8635.0 *Tourist Accommodation*

## 10.2 OVERSEAS TRADE

### LEGISLATION AFFECTING OVERSEAS TRADE

The power to make laws with respect to trade and commerce with other countries was conferred on the Commonwealth Parliament by the Commonwealth of Australia Constitution Act, Section 51 (i). Under Section 86 of the Constitution, the collection and control of duties of customs and excise passed to the Commonwealth Government on 1 January 1901. Other references to trade and commerce are contained in Sections 87 to 95 of the Constitution.

The legislation affecting overseas trade includes the Customs Act, the Customs Tariff, and the Customs Tariff (Anti-Dumping) Act. The Customs Act is the administrative Act under which the Bureau of Customs of the Department of Business and Consumer Affairs operates, while the Customs Tariff provides the statutory authority for imposing the actual rates of duty operative from time to time and the Customs Tariff (Anti-Dumping) Act provides protection for Australian industry against various forms of unfair trading.

#### The Customs Tariff

The first Australian Customs Tariff was introduced by Resolution on 8 October 1901, from which date uniform duties for each State came into effect throughout Australia. The tariff has since been extensively amended—the last major amendment was in 1965 when the tariff was re-issued in 'Brussels Nomenclature' form.

The Australian Customs Tariff has been developed in conformity with the policy of protecting economic and efficient Australian industries and of granting preferential treatment to particular imports from certain countries of the British Commonwealth. Duties are also imposed on some goods, generally of a luxury nature, for revenue purposes. Customs collections are an important source of revenue, but in its protective character the tariff has an influence also on the Australian economy. The present tariff provides for preferential and general rates of duty.

Preferential rates apply to certain goods being the produce or manufacture of the United Kingdom, Ireland, Canada, New Zealand, Papua New Guinea, declared preference countries and developing countries where specified in the schedules to the Customs Tariff. At present the preference countries are comprised mainly of members of the British Commonwealth of Nations and most of the United Kingdom's dependencies.

General rates apply to goods from all countries which do not qualify for preferential rates of duty under a particular tariff classification.

#### By-laws

Under certain Customs by-laws, goods may be admitted free of duty or at rates of duty lower than those normally applicable. A pre-requisite for such admission is that suitably equivalent goods are not reasonably available from Australian production. There are provisions under the by-law system for remitting duty in certain circumstances on imported goods which are to be incorporated in goods for export.

#### Anti-Dumping Legislation

The *Customs Tariff (Anti-Dumping) Act* 1975 provides protection for Australian industry against various forms of unfair trading. This Act authorises the imposition of a dumping duty when goods are sold to Australia at a price which is less than the normal value of the goods, or a countervailing duty on subsidised goods, where the dumping or subsidy causes or threatens material injury to an Australian industry. Special duties may

be collected also if dumped or subsidised goods are imported to the detriment of the trade of a third country in the Australian market.

### Import Controls

The effects of the world wide recession in the early 1970s have necessitated the imposition of quota controls over particular commodities to protect employment and investment in some important Australian industries.

The decision to impose import controls either in the form of import licensing or tariff quotas is made by the Commonwealth Government based on the recommendations of the body enquiring into the industry; usually the Industries Assistance Commission but if the matter is urgent, the Temporary Assistance Authority. The Standing Committee on Industries Assistance (SCIA) also examines the reports and provides advice to the Government before a decision is made.

Both forms of control are usually applied on a global basis and are intended to provide short term assistance to an industry but there are significant differences in their application.

Licensing is a non tariff form of protection that imposes an absolute restriction on the quantity, weight or value (as appropriate) of the goods that may be imported in a certain period. Goods imported without a licence cannot be entered for home consumption and may be subject to seizure as prohibited imports.

The legal basis for import licensing is the Customs (Import licensing) Regulations prescribed under the Customs Act.

In respect of goods subject to tariff quotas By-Laws are made pursuant to Section 271 of the Customs Act and Ministerial Determinations are issued pursuant to Section 273 of the Customs Act. These provide for goods to be imported and cleared for home consumption at normal rates of customs duty up to a ceiling level specified by the Government for a particular period. Additional temporary (or penalty) duties are applied to goods entered for home consumption outside the quota arrangements.

The Customs (Prohibited Imports) Regulations list those commodities the import of which is prohibited absolutely, or restricted, on social grounds. Other items are prohibited, or restricted, on health grounds (human, animal or plant) by the *Quarantine Act* 1908 and the *Therapeutic Goods Act* 1966.

### Export Controls

Under Section 112 of the Customs Act the export of goods from Australia may be prohibited absolutely, prohibited to a specific place, or prohibited unless prescribed conditions or restrictions are observed.

The *Banking Act* 1959 contains provision to ensure that the full proceeds of goods exported from Australia are received into the Australian banking system and that these proceeds are received in the currency and in the manner prescribed by the Reserve Bank of Australia.

## ADVISORY AUTHORITIES ON ASSISTANCE TO INDUSTRIES

### Industries Assistance Commission

The Tariff Board was replaced on 1 January 1974 by the Industries Assistance Commission appointed under the *Industries Assistance Commission Act* 1973. The Commission consists of not less than five and not more than nine members and its function is to hold inquiries and make reports to the Minister in respect of matters affecting assistance to industries and any other matters that may be referred to it in

accordance with the Act. The Minister responsible for the Industries Assistance Commission is currently the Minister for Business and Consumer Affairs.

Under the Industries Assistance Commission Act the Minister is required to refer to the Commission for inquiry and report on among other matters, the necessity for new, increased or reduced import duties; the necessity for prohibition or restriction of importation of any goods into Australia, or the extension, reduction or removal of any such existing restriction; the necessity to provide financial assistance to an industry by the Commonwealth Government or for increase, reduction or withdrawal of such assistance before such action is taken.

The Minister may refer to the Commission for inquiry and report on the classification of goods in the Customs Tariff or Excise Tariff and matters in connection with the interpretation of these tariffs; the question of the value for duty of goods; whether goods not prescribed in departmental by-laws should be so prescribed, and any matters in respect of which action may be taken under the *Customs Tariff (Anti-Dumping) Act 1975*.

#### Temporary Assistance Authority

Under the *Industries Assistance Commission Act 1973* the Minister for Business and Consumer Affairs may request the Temporary Assistance Authority to inquire and report as to whether urgent action is necessary to provide assistance to an Australian industry which is experiencing difficulties because of import competition. The Temporary Assistance Authority's report must be submitted to the Minister within forty-five days of the making of the request. Short term assistance provided following a report of the Temporary Assistance Authority may be subject to review by either the Temporary Assistance Authority or the Industries Assistance Commission, depending upon circumstances.

### ENCOURAGEMENT OF OVERSEAS TRADE

#### Trade Commissioner Service

The *Trade Commissioners Act 1933* provides for the appointment of Trade Commissioners and Assistant Trade Commissioners for Australia in such places as the Governor-General determines. At 31 January 1980 there was an establishment of 169 Trade Commissioners and Assistant Trade Commissioners in Australia and in 55 posts in 46 countries.

In 1957 Australia's official commercial representation was extended by the introduction of a system of Trade Correspondents. These correspondents, who are appointed in countries where there is no Trade Commission, are engaged on a part-time basis and operate under the general direction of the Trade Commissioner in whose area they are located.

The Trade Commissioner Service is administered by the Department of Trade and Resources and is responsible for overseas commercial intelligence. Particular facilities offered to Australian exporters and export organisations include market surveys, advice on selling and advertising methods, arranging introductions with buyers and agents, providing reports on the standing of overseas firms, assisting business visitors and organising trade missions, trade displays and other publicity and promotion media.

Trade Commissioners participate in inter-governmental negotiations on economic and commercial matters and where necessary make representation to Government authorities of the countries in which they are located on behalf of the Commonwealth Government and Australian firms. A Trade Commissioner may also be called upon to act as the Commonwealth Government representative in areas where there is no Australian diplomatic or consular mission.

In a number of cities where there is a diplomatic or consular mission but no Trade Commissioner, Marketing Officers are appointed to assist Australian businessmen. They work under the direction of the Trade Commissioner whose territory includes the city in which the Marketing Officer is based.

### Export Market Development Grants

The *Export Market Development Grants Act* 1974, and the *Export Expansion Grants Act* 1978 provide forms of financial incentive designed to encourage Australian exporters and prospective exporters to seek out and develop overseas markets for products, services, industrial property rights and know-how, which are substantially of Australian origin.

Amendments to the Export Market Development Grants Act in 1978 have extended its scope to Australian participants in the travel and tourist industry and the Export Expansion Grants Act specifically excludes certain products from its application. The administration of these Acts, which are operative until 30 June 1982, are the responsibility of the Export Development Grants Board.

### Export Finance and Insurance Corporation

The Export Finance and Insurance Corporation is a statutory Corporation established by the Commonwealth Government to provide Australian exporters with a specialised range of insurance, guarantee indemnity and finance facilities not normally available from commercial sources.

Since its inception, the Corporation has progressively expanded the range of facilities it offers exporters, and has assumed an increasingly important role in the development of Australian exports. The Corporation's facilities support approximately ten per cent of Australian exports and have proved a most valuable aid to Australia's export industries and companies investing overseas.

### South Australian Trade Representatives

One of the functions of the Agent-General for South Australia, located in London, is to foster trade with the United Kingdom and other countries. There are also agencies in Hong Kong, Singapore and Tokyo to investigate trade opportunities in these areas.

## TRADE AGREEMENTS

### Multilateral Agreements

The General Agreement on Tariffs and Trade (GATT), which came into force on 1 January 1948, is a multilateral trade agreement designed to facilitate trading relations and improve trading opportunities between participating countries by reducing tariff and other barriers to the free exchange of goods, and providing rules for the conduct of international trade. The Agreement includes a framework within which negotiations can be held to further reduce barriers to trade, and a structure for embodying the results of such negotiations in a legal instrument.

Australia is one of the original Contracting Parties to the GATT. At 15 February 1980, there were eighty-five contracting parties to the Agreement, two countries which had provisionally acceded (*i.e.* they participated in the GATT but had not yet contracted to it), and thirty countries which applied the provisions of the Agreement on a *de facto* basis, having formerly been colonies of contracting parties to the GATT. These 117 countries account for approximately 85 per cent of world trade.

There have been seven major rounds of multilateral tariff negotiations under the provisions of the Agreement, and a number of smaller scale negotiations preceding the

accession of individual countries. As a result, the tariff rates for a great many items entering into world commerce have been reduced and/or bound against increase.

The Tokyo Round of Multilateral Trade Negotiations (MTN), the seventh under the auspices of the GATT, were inaugurated at a meeting of Ministers in Tokyo in September 1973. Almost one hundred countries (both members and non-members of GATT) participated in the negotiations which were substantively concluded during 1979. Fourteen agreements or understandings which aim at liberalising and stabilising international trade in both industrial and agricultural products were finalised in the Tokyo Round. The subjects covered were subsidies and countervailing duties; government procurement; customs valuation; standards; import licensing; anti-dumping; trade in civil aircraft; reciprocity; more favourable treatment and fuller participation for developing countries; trade measures for balance of payments purposes; safeguard action for development purposes; notification, consultation, dispute settlement and surveillance; export restrictions; arrangements relating to bovine meat and dairy products.

Most of the developed-country participants in the negotiations had indicated, by February 1980, that they would accede to the various arrangements. The question of Australia's position was still under consideration.

Within the context of the MTN, various participants have held bilateral negotiations with the aim of exchanging tariff and access concessions. Australia has concluded bilateral agreements with the USA, EEC, Japan and Canada which, *inter alia*, provide for better access of Australian beef, dairy products and wool.

#### Bilateral Agreements

Agreements, most of which provide for the exchange of most-favoured-nation (MFN) treatment in trade matters, are in force between Australia and the following countries:

South Africa	(1932)	Hungary	(1974)
Switzerland	(1938)	Republic of Korea	(1975)
Greece	(1940)	Philippines	(1975)
Japan	(1957)	Romania	(1975)
Yugoslavia	(1970)	India	(1976)
Czechoslovakia	(1972)	German Democratic Republic	(1977)
Indonesia	(1972)	Brazil	(1978)
China	(1973)	Poland	(1978)
USSR	(1973)	Bahrain	(1979)
Bulgaria	(1974)	Thailand	(1979)
Iran	(1974)		
Vietnam	(1974)		

In addition, preferential agreements are currently operative with Canada, Malaysia and New Zealand. In general these agreements provide for the exchange of preferential rates of duty on a range of commodities traded between Australia and the countries concerned.

There are also agreements establishing free trade areas between Australia and New Zealand (NAFTA) and between Australia and Papua New Guinea (PATCRA).

Details of these agreements are contained in various issues of the *Year Book Australia*.

#### METHOD OF RECORDING IMPORTS AND EXPORTS

Overseas trade statistics are compiled by the Australian Bureau of Statistics from

documentation submitted by exporters and importers, or their agents, to the Bureau of Customs as required by the Customs Act.

#### **Exports**

In general, 'State' overseas export statistics until 1977-78 were compiled on the basis of the State in which the appropriate export documentation was lodged with the Bureau of Customs. While at one time this was generally synonymous with the State of origin of the goods, the advent of containerisation and centralisation of company accounts had resulted in a drift sufficient to make 'lodgment' a meaningless concept upon which to base State statistics, particularly in the case of South Australia where a considerable volume of goods are transported by road or rail to Melbourne for export shipment.

The ABS has changed the basis of recording State details in Australian export statistics from 'State of Lodgment' (of export documents) to 'State of Origin' (of exported goods). State of origin is defined as the State in which the final stage of production or manufacture occurs. This new recording base became operative from 1 July 1978 so that 1978-79 statistics in the following export tables are therefore on a 'State of Origin' basis. Caution should be exercised when making comparisons with earlier periods as it has not been possible to change this data to a 'State of Origin' basis.

A 'State of Final Shipment' recording base has simultaneously been developed by ABS. The table on pages 465-6 shows for comparative purposes, South Australian exports (principal commodity groups) by both 'State of Final Shipment' and by 'State of Origin'.

#### **Imports**

Imports continue to be collected and published on a 'State of Lodgment of Import Documents' basis and there is no break in the series. Imports do not provide a record of the overseas goods used or consumed in South Australia, as some of the goods pass subsequently to other Australian States and, more commonly, some goods imported through other States pass into South Australia.

#### **Commodity Classification**

From 1 July 1978, exports and imports have been classified according to the new Australian Export Commodity Classification (AECC) and Australian Import Commodity Classification (AICC) which is based on the United Nations' Standard International Trade Classification, Revision 2 (SITC R2).

#### **Valuation**

##### **Exports**

Goods sold to overseas buyers before export are valued at the f.o.b. Australian port of shipment equivalent of the actual price paid to the exporter. Goods shipped on consignment are valued at the f.o.b. Australian port of shipment equivalent of the current price offering for similar goods of Australian origin in the principal markets of the country to which they are despatched for sale.

##### **Imports**

The recorded value is the value for duty for Customs purposes (VFD). On 1 July 1976, Australia adopted the internationally recognised Brussels Definition of Value (BDV) on a free-on-board (f.o.b.) basis (i.e. charges and expenses involved in delivering the goods from the place of exportation to the place of introduction in Australia, are excluded). The value for duty is based on the normal price i.e. the price the goods would fetch at the time when duty becomes payable on a sale in the open market between a buyer and a seller independent of each other. In practice, the basis for valuation is generally taken to be the invoice price subject to certain safeguards and adjustments where necessary. It is

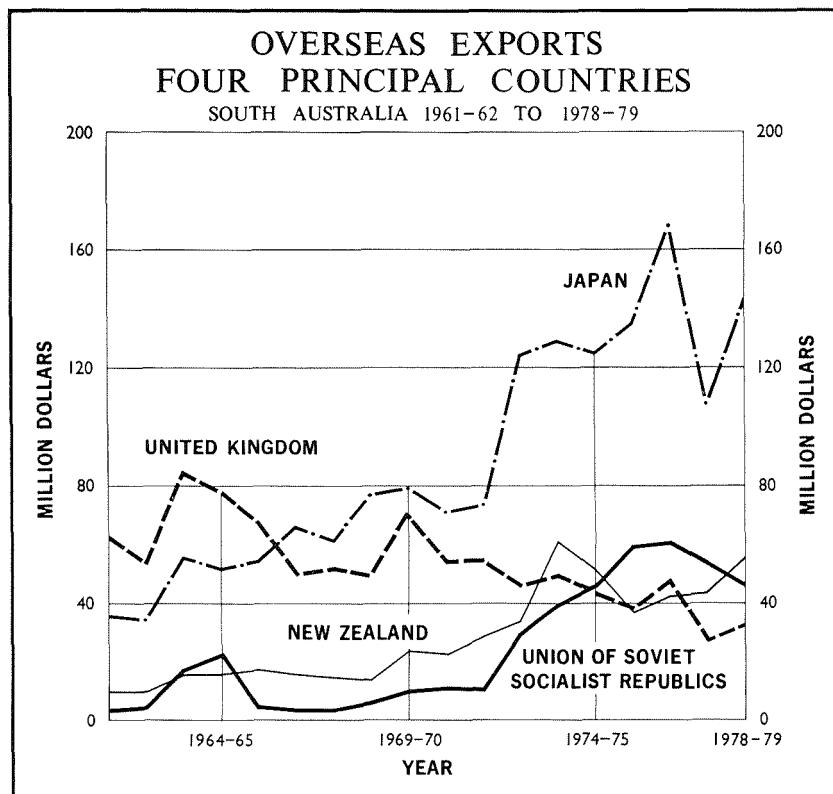
estimated that if the previous basis of valuation had continued, the value of total imports would have been about 2% higher than the recorded values on the new basis.

### Inclusions and Exclusions

Export tabulations do not include the value of stores loaded on foreign operated aircraft and ships (*e.g.* aircraft fuel, bunker oil, food and drink for passengers and crew, and ship's fittings installed on overseas-owned ships in Australian ports). The value of stores loaded on overseas operated vessels and aircraft in South Australia amounted to \$13.03 million in 1978-79. From 1 July 1976, for both imports and exports, the value recorded for each item includes the value of the outside package (containers, crates, etc.). Particulars of direct transit trade through Australia are not recorded.

### Countries

'Country of origin' appearing in import tables should be taken to mean the country of production. 'Country of consignment' appearing in export tables means the country to which goods were consigned so far as this can be determined at the time of export.



## OVERSEAS TRADE OF SOUTH AUSTRALIA

### EXPORTS

The total value of exports of goods of South Australian origin during 1978-79 was \$922.8 million. The new method of recording export statistics (see page 460) limits the validity of comparisons with previous years. In general, improved rural conditions, together with increased export values of manufactured metals, contributed to higher export levels.

#### Overseas Exports from South Australia, Principal Commodities

Commodity	1974-75	1975-76	1976-77	1977-78	1978-79(a)
QUANTITY					
Live sheep and lambs ('000)	275	430	862	1 957	1 069
Beef, veal, lamb and mutton (tonnes)	24 709	34 278	47 562	35 402	65 238
Wheat (tonnes)	1 190 166	810 603	636 769	470 148	825 503
Barley (tonnes)	922 053	922 220	835 401	423 452	846 020
Wool:					
Greasy (tonnes)	62 120	73 437	84 892	52 175	60 214
Other (tonnes) (b)	4 586	7 304	6 081	3 059	6 230
Ores and concentrates:					
Iron ('000 tonnes)	930	1 119	809	344	215
Lead and lead alloys, unworked (tonnes)	116 063	146 634	137 228	141 409	161 060
Iron and steel; blooms, billets etc. (tonnes)	547 303	466 123	535 816	336 951	399 750
VALUE (\$'000)					
Live sheep and lambs	3 354	3 873	12 178	39 380	25 398
Beef, veal, lamb and mutton	16 362	22 494	34 305	34 994	85 630
Wheat	163 411	98 978	77 900	48 361	100 221
Barley	99 517	90 290	88 072	39 512	71 470
Wool:					
Greasy	84 744	99 438	154 752	104 628	127 138
Other (b)	8 528	16 122	17 786	9 889	19 872
Ores and concentrates:					
Iron	11 695	15 165	13 562	7 010	3 708
Lead and lead alloys, unworked	44 212	37 112	58 063	73 894	108 127
Iron and steel; blooms, billets etc.	73 658	46 081	55 612	39 211	62 207

(a) 1978-79 export statistics are on a 'State of Origin' basis. For further details see page 460.

(b) From 1978-79 wool tops are excluded.

Although exports of manufactured goods have generally been increasing, the bulk of exports is still of goods usually classified as primary products. In 1978-79 the 'Crude materials, inedible' group accounted for \$211.6 million, or 22.9 per cent of exports (including wool \$147.1 million, 15.9 per cent), and the 'Food and live animals' group accounted for \$346.6 million or 37.6 per cent.

#### Overseas Exports from South Australia, Principal Commodity Groups

Commodity Group	1975-76	1976-77	1977-78	1978-79(a)
\$'000				
Food and live animals chiefly for food:				
Live animals chiefly for food	3 927	12 844	40 272	25 876
Meat and meat preparations	25 357	36 486	38 734	90 653
Dairy products and birds' eggs	5 940	6 323	5 479	6 410
Fish and fish preparations	11 639	20 662	14 212	27 258
Cereals and cereal preparations	202 551	178 260	96 878	179 211
Vegetables and fruit	7 964	8 866	8 113	14 053
Sugar, sugar preparations and honey	754	531	259	939
Feeding-stuff for animals	1 649	2 941	4 735	2 163
Other	36	60	44	37
Beverages and tobacco	3 207	3 044	2 642	3 685
Crude materials, inedible (except fuels):				
Hides, skins and fur skins, raw	10 707	19 196	13 817	21 095
Textile fibres and their wastes(b)	115 735	172 670	114 630	147 125
Crude fertilisers and crude minerals	1 831	2 263	3 014	3 278
Metalliferous ores and metal scrap	101 780	82 557	69 039	35 616
Other	2 406	3 529	3 137	4 501

**Overseas Exports from South Australia, Principal Commodity Groups (continued)**

Commodity Group	1975-76	1976-77	1977-78	1978-79(a)
\$'000				
Mineral fuels, lubricants and related materials .....	7 859	17 779	28 014	24 041
Animal and vegetable oils, fats and waxes .....	4 961	6 104	8 446	10 668
Chemicals and related products, n.e.c. ....	2 275	679	1 049	843
Manufactured goods classified chiefly by material:				
Textile yarn, fabrics and made-up articles(c) .....	849	853	611	12 450
Non-metallic mineral manufactures, n.e.c. ....	9 273	11 833	6 146	14 259
Iron and steel .....	50 391	61 078	46 811	88 575
Non-ferrous metals .....	52 656	84 602	97 103	130 692
Manufactures of metals, n.e.c. ....	4 109	7 758	12 142	4 110
Other .....	1 012	1 220	1 057	5 019
Machinery and transport equipment:				
Machinery .....	18 721	19 031	21 586	21 642
Transport equipment .....	22 172	15 765	16 063	26 739
Miscellaneous manufactured articles .....	7 767	10 839	6 530	15 242
Commodities and transactions, n.e.c. ....	4 496	2 099	1 324	6 574
Total exports .....	685 029	789 872	661 887	922 754

(a) 1978-79 export statistics are on a 'State of Origin' basis.

(b) From 1978-79 wool tops are excluded.

(c) From 1978-79 wool tops are included.

The following table shows the value of exports by commodity groups to principal countries for the year 1978-79.

**Overseas Exports from South Australia to Principal Countries  
Commodity Groups, 1978-79**

Commodity Group	Iran	Japan	New Zealand	USA	USSR	Total (a)
\$'000						
Food and live animals chiefly for food:						
Live animals chiefly for food .....	10 642	—	—	—	—	25 876
Meat and meat preparations .....	464	9 515	11	37 995	1 418	90 653
Dairy products and birds' eggs .....	—	4 365	—	100	—	6 410
Fish and fish preparations .....	—	18 054	119	4 557	—	27 258
Cereals and cereal preparations .....	2 217	26 307	3 915	28	2 134	179 211
Vegetables and fruit .....	20	524	2 906	1 718	—	14 053
Sugar, sugar preparations and honey .....	275	41	—	—	—	939
Feeding-stuff for animals .....	172	330	—	10	—	2 163
Other .....	—	—	—	—	—	37
Beverages and tobacco .....	1	113	318	189	4	3 685
Crude materials, inedible (except fuels):						
Hides, skins and fur skins, raw .....	9	1 093	139	136	—	21 095
Textile fibres and their wastes .....	235	26 998	65	1 886	42 139	147 125
Crude fertilisers and crude minerals .....	—	112	903	8	—	3 278
Metalliferous ores and metal scrap .....	—	17 671	1	1 821	—	35 616
Other .....	—	104	43	87	—	4 501
Mineral fuels, lubricants and related materials .....	—	459	8 812	8 876	—	24 041
Animal and vegetable oils, fats and waxes .....	—	998	—	90	—	10 668
Chemicals and related products, n.e.c. ....	—	4	138	206	—	843
Manufactured goods classified chiefly by material:						
Textile yarn, fabrics, made-up articles .....	404	769	559	327	—	12 450
Non-metallic mineral manufactures, n.e.c. ....	—	690	322	3 260	—	14 259
Iron and steel .....	28 327	18 193	5 689	6	—	88 575
Non-ferrous metals .....	5 405	12 625	12 839	13 554	—	130 692
Manufactures of metal, n.e.c. ....	19	31	811	1 470	—	4 110
Other .....	—	26	562	122	—	5 019
Machinery and transport equipment:						
Machinery .....	24	152	3 467	2 167	—	21 642
Transport equipment .....	5	47	8 940	710	—	26 739
Miscellaneous manufactured articles .....	14	603	1 903	5 082	—	15 242
Commodities and transactions, n.e.c. ....	4	32	480	133	—	6 574
Total exports .....	48 236	140 056	52 940	84 539	45 695	922 754

(a) To all countries.

The following table shows the value of exports to principal countries. Japan replaced United Kingdom as South Australia's principal export market in 1966-67 and has retained that position. In 1978-79 Japan took goods valued at \$140.1 million, 15.2 per cent of total exports, compared with \$107.3 million (16.2 per cent) in 1977-78. USA (\$84.5 million, 9.2 per cent) was the second largest market in 1978-79. In recent years the Persian Gulf region has become a more significant export market for South Australian goods.

#### Overseas Exports from South Australia, Principal Countries

Country of Consignment	1974-75	1975-76	1976-77	1977-78	1978-79(a)
Belgium-Luxembourg .....	11 983	28 856	\$'000	21 371	3 488
China:					
Excluding Taiwan Province .....	15 675	8 784	7 277	16 764	29 058
Taiwan Province only .....	9 729	15 212	17 988	15 330	33 165
Egypt, Arab Republic of .....	16 403	19 477	7 481	14 352	10 885
France .....	15 741	14 694	19 797	15 733	16 869
Germany, Federal Republic of .....	47 219	33 114	51 474	21 653	24 698
Hong Kong .....	7 721	14 746	19 662	10 321	32 423
India .....	20 039	15 689	16 705	22 985	23 896
Indonesia .....	13 416	12 062	9 334	11 322	11 386
Iran .....	18 190	15 736	33 704	53 024	48 236
Iraq .....	41 532	13 967	15 582	7 047	44 277
Italy .....	8 736	15 026	28 600	13 132	39 290
Japan .....	125 042	134 881	168 293	107 307	140 056
Korea, Republic of .....	19 307	4 214	7 254	12 712	32 478
Netherlands .....	21 739	26 586	17 337	13 922	2 916
New Zealand .....	51 429	37 050	42 145	43 020	52 940
Saudi Arabia .....	445	389	5 966	18 221	17 350
South Africa, Republic of .....	19 084	15 946	11 240	7 776	5 106
Sri Lanka .....	15 233	12 749	12 043	8 498	9 640
United Kingdom .....	43 650	38 728	47 348	27 160	31 847
United States of America .....	19 932	24 351	32 963	41 360	84 539
USSR .....	45 533	58 959	60 627	53 870	45 695
Other .....	176 632	123 813	135 681	122 890	182 470
Total .....	764 410	685 029	789 872	661 887	922 754

(a) 1978-79 export statistics are on a 'State of Origin' basis.

#### Exports of Wool

In 1978-79 the major export markets for South Australian wool were USSR (\$42.1 million, 28.7 per cent) and Japan (\$27.0 million, 18.4 per cent).

#### Overseas Exports of Wool from South Australia

Country of Consignment	1974-75	1975-76	1976-77	1977-78	1978-79(a)
Belgium-Luxembourg .....	2 165	2 124	3 206	2 228	1 976
France .....	9 594	7 230	8 807	4 315	5 397
Germany, Federal Republic of .....	9 671	7 487	13 925	7 179	8 535
Italy .....	4 017	8 869	9 250	2 657	9 080
Japan .....	18 108	30 635	30 460	15 392	26 999
Netherlands .....	3 602	2 837	3 820	683	930
Poland .....	2 734	3 908	6 623	2 617	4 611
United Kingdom .....	3 348	4 144	10 522	2 104	4 976
USSR .....	18 650	21 532	47 538	43 886	42 139
Yugoslavia .....	3 650	2 016	4 403	5 595	10 661
Other .....	17 735	24 778	33 984	27 861	31 706
Total .....	93 273	115 560	172 538	114 517	147 010

(a) 1978-79 export statistics are on a 'State of Origin' basis.

### Exports of Wheat

The total value of wheat exported from South Australia in 1978-79, \$100.2 million, was \$51.8 million above 1977-78 and \$63.2 million below the record of \$163.4 million in 1974-75.

The relative importance of countries of consignment fluctuates from year to year. Major buyers in 1978-79 were Iraq taking \$33.9 million and Democratic People's Republic of Korea with \$13.3 million. Previously large markets such as USSR, New Zealand and Egypt, have declined markedly since 1975-76.

**Overseas Exports of Wheat from South Australia**

Country of Consignment	1974-75	1975-76	1976-77	1977-78	1978-79(a)
\$'000					
China:					
Excl. Taiwan Province ...	15 323	7 868	3 605	10 879	10 626
Taiwan Province only .....	—	—	—	—	—
Egypt, Arab Republic of ....	13 094	16 495	1 485	2 801	4 107
Iraq .....	41 303	13 891	14 983	4 562	33 947
Korea, Democratic People's Republic of .....	—	2 119	6 184	6 294	13 312
New Zealand .....	12 819	8 110	—	—	3 913
Sri Lanka .....	11 549	10 299	11 429	7 518	8 884
USSR .....	22 149	13 193	4 007	3 312	2 134
Vietnam,					
Socialist Republic of .....	—	4 663	6 615	—	6 998
Yemen, Arab Republic of ..	1 169	3 377	4 043	—	—
Yemen, Democratic Republic of .....	—	—	8 444	3 172	7 676
Zambia .....	2 876	3 535	5 559	4 373	4 371
Other .....	43 129	15 428	11 546	5 450	4 253
Total .....	163 411	98 978	77 900	48 361	100 221

(a) 1978-79 export statistics are on a 'State of Origin' basis.

### Value of exports by 'State of Final Shipment' and by 'State of Origin'

The following table shows a comparison between the two methods of compiling State export statistics (refer to explanatory notes on page 460). The net increases, within certain limitations, represent the excess of the value of South Australia produced goods which are shipped for overseas export through ports in other States (principally the Port of Melbourne), over goods produced in other States which are shipped through South Australian ports.

**Overseas Exports from South Australia  
Principal Commodity Groups, 1978-79**

Commodity Group	State of Shipment	State of Origin	Net Difference
\$'000			
Food and live animals chiefly for food:			
Live animals chiefly for food .....	36 022	25 876	-10 146
Meat and meat preparations .....	26 890	90 653	63 763
Dairy products and birds' eggs .....	324	6 410	6 086
Fish and fish preparations .....	1 218	27 258	26 040
Cereals and cereal preparations .....	172 762	179 211	6 449
Vegetables and fruit .....	7 567	14 053	6 486
Sugar, sugar preparations and honey .....	411	939	528
Feeding-stuff for animals .....	1 344	2 163	819
Other .....	33	37	4

**Overseas Exports from South Australia  
Principal Commodity Groups, 1978-79 (continued)**

Commodity Group	State of Shipment	State of Origin	Net Difference
\$'000			
Beverages and tobacco:			
Wine and spirituous liquors .....	1 178	3 631	2 453
Other .....	8	54	46
Crude materials, inedible (except fuels):			
Hides, skins and fur skins, raw .....	5 573	21 095	15 522
Textile fibres and their wastes .....	71 512	147 125	75 613
Crude fertilisers and crude minerals .....	1 920	3 278	1 358
Metalliferous ores and metal scrap .....	77 330	35 616	-41 714
Other .....	1 617	4 501	2 884
Mineral fuels, lubricants and related materials:			
Petroleum and petroleum products .....	24 544	23 257	-1 287
Other .....	324	784	460
Animal and vegetable oils, fats and waxes:			
Animal oils and fats .....	10 456	10 611	155
Other .....	8	57	49
Chemicals and related products, n.e.c. ....	421	843	422
Manufactured goods classified chiefly by material:			
Textile yarn, fabrics, etc. ....	3 237	12 450	9 213
Non-metallic mineral manufactures, n.e.c. ....	3 190	14 259	11 069
Iron and steel .....	86 884	88 575	1 691
Non-ferrous metals .....	95 988	130 692	34 704
Manufactures of metal, n.e.c. ....	2 080	4 110	2 030
Other .....	1 336	5 019	3 683
Machinery and transport equipment:			
Machinery .....	8 810	21 642	12 832
Transport equipment .....	8 161	26 739	18 578
Miscellaneous manufactured articles .....	1 662	15 242	13 580
Commodities and transactions, n.e.c. ....	6 037	6 574	537
Total exports .....	658 847	922 754	263 907

### IMPORTS

The total value of overseas imports passing through Customs recording points in South Australia during 1978-79 was \$865.6 million, \$237.0 million greater than the level of 1977-78.

Imports were substantially augmented in 1978-79 by the importation direct into South Australia of military aircraft purchased from the USA. Increases were recorded in most other commodities, the most significant being petroleum products (reflecting price increases rather than increased volume), machinery, motor vehicle components, natural fertilisers and metals.

**Overseas Imports to South Australia, Principal Commodity Groups**

Commodity Group	1975-76	1976-77	1977-78	1978-79
\$'000				
Food and live animals chiefly for food .....	10 189	17 778	18 207	16 530
Beverages and tobacco .....	1 860	2 675	2 533	3265
Crude materials, inedible (except fuels):				
Cork and wood .....	16 773	24 433	16 379	19 454
Crude fertilisers and crude minerals .....	10 699	14 937	12 819	20 782
Other .....	3 661	4 951	5 850	7 338
Mineral fuels, lubricants and related materials .....	126 894	155 077	181 455	200 285
Animal and vegetable oils, fats and waxes .....	1 555	1 016	1 166	475
Chemicals and related products, n.e.c. ....				
Organic chemicals .....				6 372
Inorganic chemicals .....				2 771
Artificial resins and plastic materials, and cellulose esters and ethers .....	16 544	23 814	27 164	8 464
Other .....				10 845

Overseas Imports to South Australia, Principal Commodity Groups (*continued*)

Commodity Group	1975-76	1976-77	1977-78	1978-79
\$'000				
Manufactured goods classified chiefly by material:				
Rubber manufactures .....	7 464	10 045	9 011	11 789
Paper, paperboard and manufactures thereof .....	10 251	17 019	16 177	20 301
Textile yarn, fabrics and made-up articles .....	20 156	25 440	23 770	27 052
Non-metallic mineral manufactures, n.e.c. ....	14 721	18 854	11 701	13 223
Iron and steel .....	10 266	18 755	19 726	24 263
Non-ferrous metals .....	1 848	2 759	2 043	8 874
Manufactures of metal, n.e.c. ....	8 600	10 747	10 484	15 272
Other .....	5 811	6 682	6 011	6 789
Machinery and transport equipment:				
Power generating machinery and equipment .....				25 120
Machinery specialised for particular industries .....				42 698
Metalworking machinery .....				7 596
General industrial machinery and equipment, n.e.c. ....				32 676
Office machines and ADP equipment .....		116 027	127 970	125 786
Telecommunications and sound recording/ reproducing apparatus and equipment .....				3 297
Electrical machinery, apparatus and appliances, n.e.c. ....				10 896
Road vehicles .....	66 667	99 464	90 197	112 921
Other transport equipment .....				124 629
Miscellaneous manufactured articles:				
Footwear, articles of apparel and clothing accessories .....	5 580	7 913	7 581	6 770
Professional, scientific and controlling instruments; photographic and optical goods, clocks and watches .....	5 395	6 798	7 061	10 545
Other .....	26 111	26 993	29 032	30 394
Commodities and transactions, n.e.c. ....	14 406	5 190	4 413	4 405
Total .....	501 476	629 309	628 568	865 554

The proportions of imports obtained from the major sources have changed considerably in the years since the 1939-45 War e.g. in 1953-54 Japan supplied only 0.46 per cent of the total value of imports into South Australia but in 1978-79 accounted for 19.0 per cent; United Kingdom which supplied over half the imports in 1953-54 accounted for only 6.7 per cent in 1978-79. The United States of America was the major source of imports into South Australia in 1978-79 with \$231.5 million, representing 26.7 per cent of the total value of imports. Large consignments of military aircraft (\$124 million) contributed substantially to the unusually high level of imports from USA. Saudi Arabia was the second largest source of imports with \$185.9 million, or 21.5 per cent of total imports.

The following table shows, by commodity groups, the imports from principal countries during the year 1978-79.

Overseas Imports to South Australia from Principal Countries  
Commodity Groups, 1978-79

Commodity Group	Germany, Federal Republic of	Japan	Saudi Arabia	United Kingdom	USA	Total (a)
\$'000						
Food and live animals chiefly for food .....	412	1 091	—	1 419	955	16 530
Beverages and tobacco .....	92	—	—	1 387	—	3 265
Crude materials, inedible (except fuels):						
Cork and wood .....	7	1	—	3	5 987	19 454
Crude fertilisers and crude minerals .....	2	625	—	149	1 667	20 782
Other .....	992	139	—	296	1 531	7 338
Mineral fuels, lubricants and related materials .....	50	302	185 918	190	402	200 285
Animal and vegetable oils, fats and waxes .....	—	—	—	14	21	475

**Overseas Imports to South Australia from Principal Countries  
Commodity Groups, 1978-79 (continued)**

Commodity Group	Germany, Federal Republic of	Japan	Saudi Arabia	United Kingdom	USA	Total (a)
\$'000						
Chemicals and related products, n.e.c.:						
Organic chemicals .....	438	896	—	372	3 017	6 372
Inorganic chemicals .....	361	614	—	594	280	2 771
Artificial resins and plastic materials, and cellulose esters and ethers .....	931	1 573	—	1 170	2 460	8 464
Other .....	2 045	370	—	3 203	3 520	10 845
Manufactured goods classified chiefly by materials:						
Rubber manufactures .....	521	3 648	—	2 231	1 724	11 789
Paper, paperboard and manufactures thereof .....	1 367	1 672	—	636	1 317	20 301
Textile yarn, fabrics and made-up articles .....	638	3 470	—	2 250	6 226	27 052
Non-metallic mineral manufactures, n.e.c. ....	804	2 878	—	1 441	1 238	13 223
Iron and steel .....	293	18 499	—	1 514	614	24 263
Non-ferrous metals .....	7 381	210	—	225	606	8 874
Manufactures of metal, n.e.c. ....	1 906	2 630	—	3 084	2 427	15 272
Other .....	64	48	—	313	329	6 789
Machinery and transport equipment:						
Power generating machinery and equipment .....	1 076	6 156	—	7 147	9 366	25 120
Machinery specialised for particular industries .....	5 103	4 098	—	3 172	22 222	42 698
Metalworking machinery .....	529	2 257	—	1 757	681	7 596
General industrial machinery and equipment, n.e.c. ....	2 926	3 324	—	5 409	12 638	32 676
Office machines and ADP equipment .....	3	1 198	—	144	1 464	3 297
Telecommunications and sound recording/ reproducing apparatus and equipment .....	1 691	6 826	—	271	626	10 896
Electrical machinery, apparatus and appliances, n.e.c. ....	3 604	6 437	—	5 482	5 279	29 462
Road vehicles .....	7 530	89 542	—	2 227	8 645	112 921
Other transport equipment .....	6	2	—	160	124 345	124 629
Miscellaneous manufactured articles .....	2 430	5 475	—	11 734	11 002	47 709
Commodities and transactions, n.e.c. ....	558	228	—	376	926	4 405
Total .....	43 757	164 210	185 918	58 370	231 518	865 554

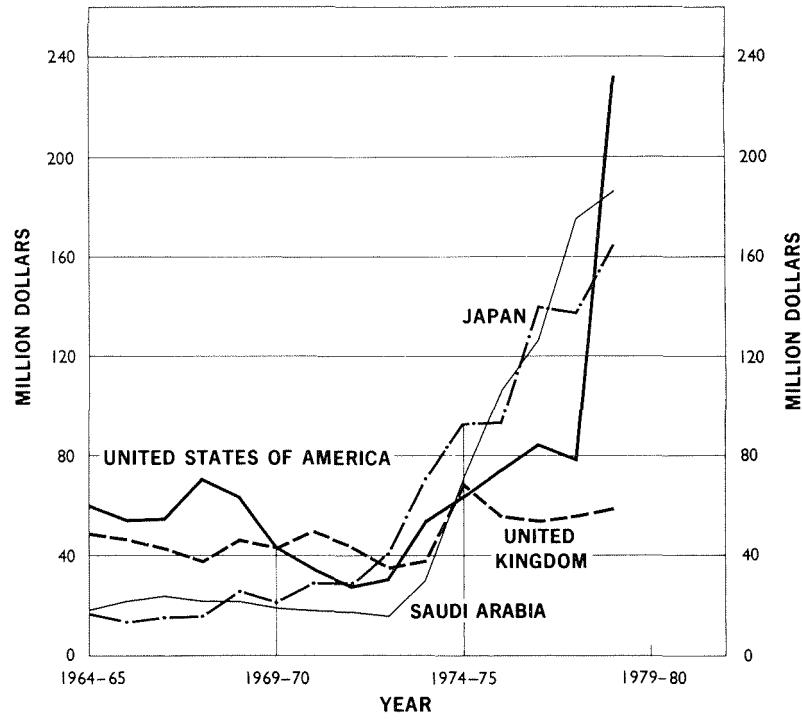
(a) From all sources.

**Overseas Imports to South Australia, Principal Countries**

Country of Origin	1974-75	1975-76	1976-77	1977-78	1978-79
\$'000					
Canada .....	15 752	11 237	19 690	17 714	18 164
China:					
Excluding Taiwan Province ....	2 181	1 882	2 888	2 940	3 069
Taiwan Province only .....	6 180	5 787	8 856	8 737	10 628
France .....	10 861	9 816	9 858	7 528	9 089
Germany, Federal Republic of .....	31 304	23 509	32 118	32 751	43 757
Italy .....	13 879	9 872	25 935	13 930	19 014
Japan .....	92 430	93 097	139 884	136 985	164 210
Netherlands .....	9 296	10 359	12 570	9 181	7 402
New Zealand .....	6 787	8 815	14 888	13 988	13 276
Saudi Arabia .....	70 514	105 758	126 123	174 679	185 918
United Kingdom .....	68 479	55 843	53 599	55 637	58 370
United States of America .....	63 140	74 430	84 208	78 382	231 518
Other .....	91 274	91 071	98 692	76 116	101 139
Total .....	482 077	501 476	629 309	628 568	865 554

## OVERSEAS IMPORTS FOUR PRINCIPAL COUNTRIES

SOUTH AUSTRALIA 1964-65 TO 1978-79



### TRADE AT PRINCIPAL PORTS

About 98 per cent of imports are unloaded at Port Adelaide and Port Stanvac but the proportion of exports loaded there is much lower—in 1978-79 it was approximately 45 per cent. Exports from Port Pirie principally comprise pig-lead, concentrates and ores (the produce of Broken Hill), wheat and barley. Shipments of wheat and barley constitute the major part of exports from Port Lincoln, Wallaroo, Ardrossan, Thevenard and Port Giles.

It should be noted that all export statistics before 1978-79 are by 'State of Lodgment' of documents whereas the 1978-79 export figures in the following table are shown as 'State of Final Shipment'. Therefore there is a significant break in series with Port Adelaide figures being particularly affected. For further details on the change of basis of recording export statistics see page 460.

## Value of Overseas Trade: Principal Ports, South Australia

Port	1974-75	1975-76	1976-77	1977-78	1978-79
IMPORTS (\$'000)					
Port Adelaide (a) .....	382 742	365 785	484 642	446 018	654 050
Port Lincoln .....	3 398	3 739	3 490	1 993	3 862
Port Pirie .....	3 059	2 274	691	9	6 758
Port Stanvac .....	84 490	111 100	129 014	174 679	193 159
Thevenard .....	—	—	—	—	—
Wallaroo .....	1 080	—	4 442	2 096	4 057
Whyalla .....	7 309	18 578	7 030	3 771	3 669
Total .....	482 077	501 476	629 309	628 568	865 554
EXPORTS (\$'000)					
Ardrossan .....	15 751	2 539	10 428	6 873	7 314
Port Adelaide (a) .....	357 929	372 564	467 363	403 918	275 341
Port Augusta .....	1 940	—	—	444	1 168
Port Giles (b) .....	5 506	3 082	10 282	4 311	6 634
Port Lincoln .....	91 230	58 120	54 236	28 997	47 322
Port Pirie .....	115 587	109 370	112 416	118 049	147 233
Port Stanvac .....	1 276	7 374	15 738	25 736	24 079
Thevenard .....	35 967	17 160	7 514	7 498	31 566
Wallaroo .....	46 920	51 292	37 764	12 193	28 656
Whyalla .....	92 304	63 528	74 131	53 868	89 533
Total .....	764 410	685 029	789 872	661 887	658 847

(a) Includes 'Parcels Post, Adelaide'; 'Adelaide City (including Adelaide Airport)'; Stenhouse Bay and Woomera.

(b) Includes Edinburgh.

## CUSTOMS AND EXCISE DUTY

Excise duty is levied on specific goods of Australian manufacture, principally for the purpose of raising revenue. Although these excise goods do not form a part of overseas trade, the rate of excise duty is in some cases related to the import duty on similar goods. The following table gives details of the value of customs duty and excise duty collected in South Australia during the years 1975-76 to 1977-78.

## Customs and Excise: Gross Revenue, South Australia

Customs Tariff and Excise Tariff Item	1975-76	1976-77	1977-78
CUSTOMS			
Live animals; animal products .....	62	56	39
Vegetable products .....	26	34	19
Animal and vegetable oils and fats .....	144	77	76
Prepared foodstuffs; beverages; vinegar; tobacco:			
Spirituous and alcoholic preparations .....	7 138	8 165	7 745
Tobacco, cigarettes, etc. ....	1 052	1 061	956
Other .....	574	641	495
Automotive spirit and other mineral products .....	4 918	5 373	1 004
Chemicals and products thereof .....	307	361	295

**Customs and Excise: Gross Revenue, South Australia (continued)**

Customs Tariff and Excise Tariff Item	1975-76	1976-77	1977-78
CUSTOMS ( <i>cont.</i> )			
Plastics, resins, rubber and manufactures thereof .....	2 388	3 118	3 519
Hides, skins, leather and articles thereof .....	286	388	360
Wood and articles thereof .....	2 019	2 642	1 803
Paper-making material; paper and paper manufactures .....	509	829	850
Textiles and textile articles .....	4 847	6 260	5 564
Footwear, headgear, umbrellas, etc. ....	283	635	595
Articles of stone, cement, ceramics, glass etc. ....	1 052	1 367	1 146
Pearls, precious stones and metals, imitation jewellery, coin, etc. ....	315	474	459
Base metals and articles thereof .....	2 422	3 414	3 147
Electrical and mechanical machines and machinery ...	12 926	14 429	11 929
Transport equipment and parts thereof .....	16 634	24 018	19 419
Optical, surgical and scientific instruments, etc. ....	853	1 128	1 102
Arms and ammunition and parts thereof .....	20	27	17
Miscellaneous manufactured articles .....	1 143	1 523	1 469
Works of art, antiques, etc. ....	7	15	4
Other customs revenue .....	7	10	—
Primage .....	298	351	436
Total gross customs and primage duties .....	60 229	76 398	62 447
EXCISE			
Petroleum products .....	57 435	57 964	68 261
Spirits .....	13 086	13 155	13 138
Tobacco, cigars and cigarettes .....	51 717	54 423	53 776
Other .....	53 940	55 489	56 211
Total gross excise duties .....	176 178	181 031	191 386
<b>Total gross customs, primage and excise revenue</b>	<b>236 407</b>	<b>257 429</b>	<b>253 833</b>

**Further References**

Additional information may be found in the following publications:

**South Australian Office**

5402-4 *Overseas Trade*

5403-4 *Exports*

5404-4 *Imports*

**Central Office**

5409-0 *Overseas Trade, Part 1: Exports and Imports*

5410-0 *Overseas Trade, Part 2: Comparative and Summary Tables*

5411-0 *Australian Exports, Country by Commodity*

5413-0 *Australian Imports, Country by Commodity*

## 10.3 PRICES

### MEASUREMENTS OF PRICE MOVEMENTS

The prices of a wide range of commodities and services are recorded at regular intervals by the Australian Statistician for the purpose of compiling various price indexes or for publication of series showing actual price levels.

Price indexes aim to measure the degree of change in price levels, or more specifically the proportionate change in the aggregate price, of specified quantities and qualities of a list of selected items. These indexes measure changes through time and it is traditional for presentation purposes to select a certain year, known as the base year, to equate the average aggregate price (of the list of items) in that year to 100 or some other suitable number, and to adjust other years on a proportionate basis.

When index numbers for different places are compared (*e.g.* Consumer Price Index, Capital Cities) the only legitimate comparison is the relative change *i.e.* that prices increased or decreased more in one place than another; even when a common base year is used the actual levels of prices, equated to 100 in each case, may differ substantially from place to place; in addition, selected items, qualities or weights may differ from place to place.

In constructing a price index it is necessary to limit attention to a selected list of items because it would clearly be impossible to determine at regular intervals the price of all items entering into a given field of expenditure (*e.g.* household expenditure in the case of the Consumer Price Index). The list of items selected must be as representative as possible of the field to be covered and consist of items for which price variations can be ascertained accurately at regular intervals. Each item must be assigned a relative importance (weight) in approximate proportion to actual expenditures on that item within the total field of expenditure being considered. Particular care must be taken to detect, assess, and make allowance for changes in quality of selected items.

Over time it becomes necessary to substitute new grades, qualities or types of articles for those formerly used as indicators of price movements in an effort to keep an index representative of current patterns of expenditure. These substitutions can normally be achieved without invalidating the index. From time to time major changes in the overall pattern of expenditure are noted, and in the past these have prompted the abandonment of an existing index in favour of a different index, the composition and weighting of which were more representative of expenditure at that time.

### RETAIL PRICE INDEXES

A brief historical review of early price indexes was included on page 494 of the *South Australian Year Book 1970*. Details of movements in the 'C' Series Index from 1901 to 1959 are shown in the Statistical Summary Appendix A.

#### Consumer Price Index

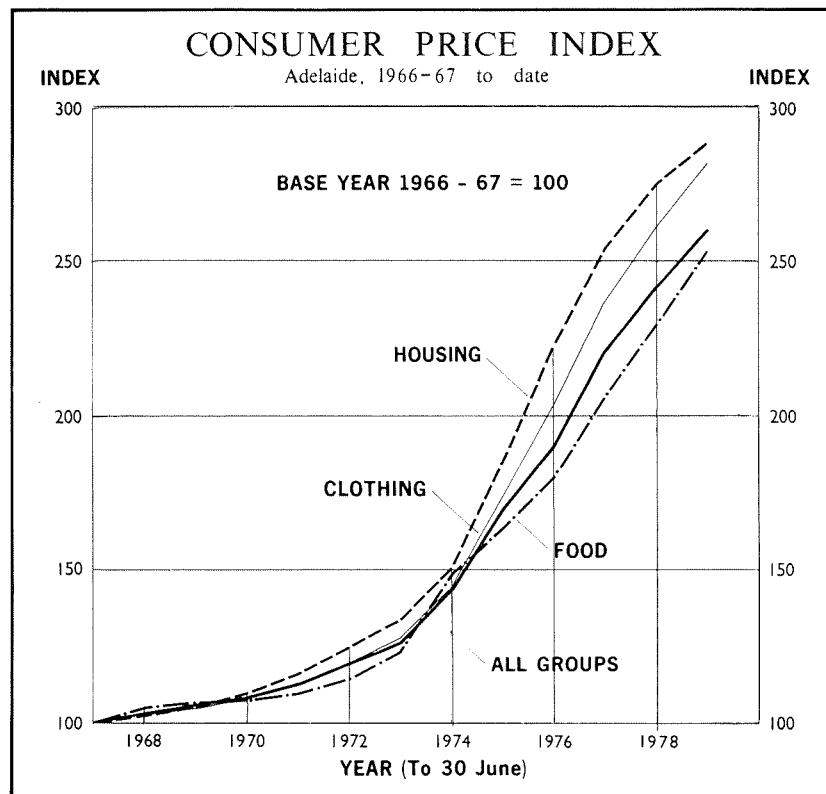
The Consumer Price Index (CPI) is a chain of 'fixed weight aggregative' linked indexes with significant changes in composition and weighting effected at regular short intervals. Links have previously been effected at June quarter 1952, June quarter 1956, March quarter 1960, December quarter 1963, December quarter 1968 and December quarter 1973 with a minor link at September quarter 1974. A further link in the series was made at September quarter 1976.

During each period between links the weighting pattern remains unchanged. At times of linking the weighting pattern is brought up-to-date and the content of the Index is reviewed. Under this method, in effect, average percentage price movements are

assessed on one pattern up to the time of the link and on another pattern thereafter. The process of linking ensures that the series reflects only price variations and not differences in cost of the old and new combinations and lists of items. The introduction of new items and weights by linking does not, of itself, raise or lower the level of the Index.

There are no ideal points of time for linking the various series since, particularly in times of disparate and large price movements, the application of different weights to the same price series over the same periods of time would cause differences in aggregative changes. The ninth series was introduced from September quarter 1976, the earliest possible stage following availability of detailed data from the Household Expenditure Survey 1974-75.

The structure of the new series is derived from this survey which was the first survey of this type conducted by the Australian Bureau of Statistics. This enables the Index to be related more specifically to a 'target group' of the population (see next paragraph) and to have appropriate separate weighting patterns for each of the seven cities for which index numbers are compiled. The ninth series measures variations in retail prices for goods and services representing more than 90 per cent of defined household expenditure by the target group.



The target group for the ninth CPI series comprises metropolitan wage and salary earner households with total income of more than the minimum adult wage but excluding the top ten per cent of such households. 'Metropolitan wage and salary earner households' are those households (as defined in the Household Expenditure Survey) which derive at least seventy-five per cent of total income from wages and salaries. The minimum adult wage is that for each capital city separately. The 'top ten per cent' of households excluded were those whose incomes are more than the ninth decile of the population of wage and salary earner households in all metropolitan areas combined.

This target group was determined as a suitable current basis which was also in keeping with the past general description of the CPI as a measure of variations in prices of goods and services as affecting a high proportion of the expenditure of wage earner households in the aggregate. A special tabulation from the Household Expenditure Survey 1974-75 for households within this target group supplied the basic weighting pattern for the Index. The households included had average weekly total household incomes which ranged from approximately \$60 to \$370 in 1974-75.

The structure of the Index after the eighth link is shown in the following table which describes the weights of the groups into which the Index has been subdivided in the form of percentages contributed by each group to the total Index aggregate for September quarter 1976. These percentages indicate the relative influence given to the various components in measuring the degree of price change from September quarter 1976 (*i.e.* from the beginning of the new linked series). These proportions represent the amounts of expenditure shown by the 1974-75 Household Expenditure Survey (for the target group) revalued at the price levels of March quarter 1978.

**Consumer Price Index: Six State Capital Cities Combined Composition  
March Quarter 1978**

Group	Percentage Contribution to Total Index Aggregate (a)
Food .....	20.839
Clothing .....	10.280
Housing .....	13.258
Household equipment and operation .....	14.170
Transportation .....	17.761
Health and personal care .....	6.625
Recreation .....	7.719
Tobacco and alcohol .....	9.348
 All Groups .....	 100.000

(a) Percentage contributions shown are in proportion to expenditure in 1974-75 valued at relevant prices of March quarter 1978.

The wide range of commodities and services in the Consumer Price Index are arranged in eight major groups, with index numbers compiled for each of these groups as well as a total for all items. Index numbers for Adelaide for these individual groups and for 'All Groups' are recorded in the next table.

**Consumer Price Index, Adelaide<sup>(a)</sup>**  
**Base Year: 1966-67 = 100.0**

Quarter	Food	Clothing	Housing	Household Equipment and Operation	Transportation	Tobacco and Alcohol	Health and Personal Care	Recreation	All Groups
<b>1977:</b>									
March .....	207.6	240.7	258.1	192.7	217.7	225.5	313.9	105.0	224.7
June .....	214.4	248.6	263.3	196.2	223.0	227.6	318.0	109.0	230.1
September .....	224.3	252.0	268.0	201.0	228.4	231.4	320.8	109.7	235.6
December .....	228.0	260.2	275.7	206.8	234.2	233.1	324.1	112.6	241.0
<b>1978:</b>									
March .....	229.7	262.6	277.4	208.1	236.4	234.7	328.2	114.9	243.1
June .....	236.9	269.9	279.1	211.9	240.3	236.1	332.3	116.6	247.6
September .....	242.7	273.2	279.6	214.4	246.5	237.6	354.7	118.6	252.6
December .....	248.7	280.2	288.3	217.2	253.9	272.8	282.1	121.6	256.9
<b>1979:</b>									
March .....	254.8	283.3	291.3	222.2	259.2	273.4	285.3	123.6	261.3
June .....	265.6	291.5	295.1	224.6	269.3	275.2	287.1	126.4	267.9
September .....	274.1	294.6	297.6	229.9	277.2	276.7	291.2	127.1	273.3
December .....	280.3	299.9	306.5	237.4	286.9	283.3	350.8	129.8	283.6

(a) For 'Health and Personal Care' group index, base period December quarter 1968 = 100.0 and for 'Recreation' group index, base period September quarter 1976 = 100.0.

The 'All Groups' index for Adelaide is shown in the following table with that for each of the other capital cities. It is emphasised that these numbers reflect changes in prices within each individual city, but they do *not* measure differences in the level of prices between cities, and the Consumer Price Index should *not* be regarded as a 'cost of living' index.

**Consumer Price Index, Adelaide and Other Capital Cities<sup>(a)</sup>**

Year	Sydney	Melbourne	Brisbane	<b>Adelaide</b>	Perth	Hobart	Six State Capital Cities	Canberra
1966-67 .....	100.0	100.0	100.0	<b>100.0</b>	100.0	100.0	100.0	100.0
1967-68 .....	103.2	103.7	103.3	<b>102.9</b>	102.9	104.6	103.3	102.6
1968-69 .....	106.2	106.2	105.5	<b>105.3</b>	105.5	106.1	106.0	104.4
1969-70 .....	110.6	108.7	108.4	<b>108.2</b>	109.4	108.5	109.4	107.4
1970-71 .....	116.8	113.1	114.2	<b>112.5</b>	114.1	112.6	114.6	113.0
1971-72 .....	126.3	119.7	121.6	<b>119.2</b>	120.7	119.9	122.4	119.4
1972-73 .....	133.9	127.2	128.6	<b>126.5</b>	127.3	126.7	129.8	126.3
1973-74 .....	151.3	144.0	146.1	<b>143.9</b>	140.6	142.6	146.6	142.8
1974-75 .....	176.1	167.9	168.7	<b>169.7</b>	166.1	166.7	171.1	164.9
1975-76 .....	199.0	189.5	190.9	<b>190.5</b>	189.6	190.0	193.3	187.3
1976-77 .....	223.4	216.6	218.0	<b>220.1</b>	219.4	217.7	220.0	212.9
1977-78 .....	243.2	238.2	238.4	<b>241.8</b>	243.1	239.1	241.0	232.3
1978-79 .....	264.4	256.8	258.0	<b>259.7</b>	262.8	257.7	260.7	251.1

(a) Base year 1966-67 = 100.0.

The quarterly information discussed above was supplemented in April 1973 by the release of monthly Consumer Price Index numbers for the food group and its component sub-groups for the period March 1972 to March 1973.

Further details and a continuation of the series may be obtained from the bulletin *Consumer Price Index: Monthly Food Group Index* (Catalogue No. 6402.0) published by the Australian Statistician.

### Household Expenditure Surveys

During the financial years 1974-75 and 1975-76, the Australian Bureau of Statistics conducted two surveys in order to obtain information about the expenditure patterns of private households. Apart from limited attempts in 1910-11 and 1913 to assess the spending patterns of Australian households, these surveys were the first official collections of household expenditure statistics conducted in this country.

The collection of data relating to expenditure at the household level is important in providing information for use in improving the representativeness of the items and the weighting pattern used to compile the Consumer Price Index.

The 1975-76 survey sampled 5 869 households in all regions of Australia. Only private dwellings were sampled, including houses, home units, flats, caravans, tents and any other structures being used as private places of residence at the time of the survey. Hotels, boarding houses, institutions, etc. were defined as special dwellings outside the scope of the survey.

Information was collected on a household basis rather than for selected individuals in the population, because many items of expenditure such as food, accommodation and household goods and appliances relate to the household as a unit.

All categories of households (or persons) in selected private dwellings were included in the survey except: (a) foreign diplomats and their staff; (b) foreign servicemen and their families stationed in Australia; (c) persons from overseas countries touring or holidaying in Australia; (d) visitors staying with the household for less than six weeks after the initial interview (four weeks in the 1974-75 survey); (e) usual residents absent at the time of the initial interview and not returning within seven days; and (f) usual residents who were going away during the first half of the diary keeping and not returning before the end of diary keeping.

Each household was asked for details of large or infrequent items of expenditure (*e.g.* purchase of vehicles and property, and the payment of household bills such as electricity and gas) and for details of income from all sources. In addition, a diary was provided to each household member aged 15 years or more, in which they were requested to record, on a daily basis, a description and value of all items purchased over the following two weeks. (Because of anticipated differences in spending patterns in rural areas compared with metropolitan and other urban areas, members of rural households selected in the 1975-76 survey were issued with four-week diaries.)

Further details on methodology and definitions may be obtained from the bulletin *Household Expenditure Survey 1974-75*, Bulletin 1, 'An Outline of Concepts, Methodology and Procedures' (Catalogue No. 6507.0).

**Household Expenditure by Household Income, South Australia, 1975-76**

Particulars	Weekly Household Income							All Households
	Under \$80	\$80-\$139	\$140-\$199	\$200-\$259	\$260-\$339	\$340 or more		
Number of households in sample ...	104	85	107	96	81	77		550
Estimated total number of households in population ('000) .....	64.3	53.3	71.0	69.6	58.8	57.6		374.6
Average number of persons per household .....	1.64	2.23	3.16	3.01	3.36	3.75		2.86
Average age of household head (yrs)	62.32	49.38	41.01	40.83	38.42	43.61		45.82
Average weekly household income (\$)	54.16	112.05	168.24	227.50	291.79	468.62		217.27
Commodity or service:							Average Weekly Household Expenditure (\$)	
Current housing cost(a) .....	7.51	13.15	17.58	22.37	26.60	32.38		19.80
Fuel and power .....	2.15	2.53	4.69	3.63	3.02	4.32		3.43

**Household Expenditure by Household Income, South Australia, 1975-76 (continued)**

Particulars	Weekly Household Income						
	Under \$80	\$80- \$139	\$140- \$199	\$200- \$259	\$260- \$339	\$340 or more	All Households
Average Weekly Household Expenditure (\$) (continued)							
Commodity or service: (continued)							
Food .....	17.06	21.36	32.02	33.74	38.84	48.97	31.93
Bread, cakes and cereals .....	2.44	2.45	4.03	3.80	4.26	4.65	3.62
Meat and fish .....	4.45	5.14	7.29	7.51	7.96	10.88	7.20
Dairy products, oils and fats ...	2.81	3.56	5.08	4.70	4.68	6.30	4.53
Fruit and vegetables .....	2.68	2.89	4.38	4.27	4.55	6.57	4.22
Other food .....	4.68	7.32	11.24	13.47	17.38	20.58	12.37
Alcohol and tobacco .....	1.86	7.96	7.87	9.06	12.20	17.01	9.16
Clothing and footwear .....	4.74	7.02	10.25	15.91	18.90	29.60	14.23
Household equipment and operation .....	6.07	9.13	11.96	21.69	30.64	24.70	17.25
Medical care and health expenses .....	2.14	4.73	5.93	5.48	5.23	8.84	5.36
Transport and communication .....	14.19	26.08	27.67	31.68	48.61	48.84	32.42
Recreation and education .....	3.65	8.19	13.82	20.61	30.32	27.70	17.26
Miscellaneous goods and services .....	5.48	9.13	10.16	16.02	17.36	27.07	14.03
Total expenditure .....	64.84	109.29	141.94	180.20	231.73	269.43	164.87
Selected other payments(b) .....	8.64	14.96	26.22	49.52	56.69	97.54	41.68

(a) Included in current housing costs are both principal and interest components of any housing loan repayments. Excluded are outright purchase of, or deposit on, dwellings or land, and other payments of a capital nature.

(b) The main components of this item are income tax, superannuation contributions, life insurance premiums, purchases of and deposits on dwellings and land, and gambling payments. Receipts from sales of dwellings and land, and gambling winnings, are offset against payments.

In the lower income ranges, average expenditure exceeded average income as defined (this does not imply that all households in the lower income ranges have expenditure which exceeds income), while in the higher income ranges average income substantially exceeded average expenditure (see above). It should be noted that some households will have financed some items of expenditure from savings and from other sources such as loans, receipts of maturing insurance policies, gifts, windfall gains and profits from the sale of assets which are not included as income as defined for the survey. In addition, some households classified to the lower income ranges may have had lower than usual income during the data reference period, while still maintaining their normal level of expenditure. For the medium and higher income ranges, income tax payments (included in other payments) are a large part of the difference between income and expenditure as defined.

The larger items of average weekly household expenditure in 1975-76 were transport and communication (\$32.42), food (\$31.93), and current housing costs (\$19.80).

#### OTHER PRICE INDEXES

At December 1979 the following indexes covering non-retail sectors of the economy had been prepared and published by the Australian Statistician:

- Export Price Index,
- Price Index of Electrical Installation Materials,
- Price Index of Metallic Materials Used in the Manufacture of Fabricated Metal Products,
- Price Index of Copper Materials Used in the Manufacture of Electrical Equipment,
- Price Index of Materials Used in Manufacturing Industry,
- Price Index of Articles Produced by Manufacturing Industry,
- Price Index of Materials Used in House Building,
- Price Index of Materials Used in Building Other than House Building.

Separate State figures are published for the latter two indexes, and these are further explained below. Details of the other indexes are available in bulletins published by the Australian Statistician and, in addition, a brief explanation of the Price Index of Articles Produced by Manufacturing Industry was included in the *South Australian Year Book* 1977.

### Price Index of Materials Used in House Building

This Index was introduced in November 1970. It measures changes in prices of selected materials used in the construction of houses. It is a fixed weights index, the composition of which is in accordance with the usage of materials in actual houses which were selected as representative for the purpose. The Index does not purport to represent buildings of any kind other than houses.

In the interests of uniformity and ease of use the reference base of the Index is the year 1966-67 = 100.0 the same as that used for the Price Index of Materials Used in Building Other than House Building. However, because of the later time at which the weighting source data were collected, the weighting base approximates more closely the year 1968-69. Each State capital city has a unique weighting pattern which reflects the difference in the estimated relative importance of given items as between cities.

Prices are collected at the mid-point of the month to which the Index refers, or as near thereto as practicable. They relate to specified standards of each commodity and are obtained in all State capital cities from representative suppliers of materials used in house building.

Further information concerning the method of compiling the Index, as well as more detailed group index numbers and the separate weighting patterns for the six State capital cities may be found in the publication *Price Index of Materials Used in House Building* (Catalogue No. 6408.0). A full description of the Index is also given in the *Labour Report* No. 58, 1973, and the *Year Book Australia*.

The following table shows, for separate groups of items and all groups combined, the index numbers for Adelaide and the weighted average index numbers for the six State capital cities.

**Price Index of Materials Used in House Building**  
(Base of each Index: 1966-67 = 100.0)

Group	Adelaide			Weighted Average Six State Capital Cities		
	1976-77	1977-78	1978-79	1976-77	1977-78	1978-79
Concrete, etc. ....	218.3	245.5	262.2	217.8	239.0	255.5
Cement products .....	272.9	303.0	323.9	258.9	284.6	303.8
Clay bricks, tiles, etc. ....	229.3	251.0	276.5	227.8	245.8	262.2
Timber, board, etc. ....	292.1	314.2	339.5	254.1	275.0	290.8
Steel products .....	264.1	284.2	301.8	263.2	287.7	307.6
Other metal products .....	210.5	212.0	229.0	207.9	220.1	239.7
Plumbing fixtures, etc. ....	225.3	237.3	246.2	224.3	239.1	244.1
Electrical installation materials	188.6	203.7	226.1	201.8	215.5	240.0
Installed appliances .....	190.6	204.4	218.0	181.9	193.3	202.9
Plaster and plaster products ....	188.5	201.7	220.3	178.8	191.8	204.3
Miscellaneous materials .....	229.5	248.4	267.3	210.7	230.4	248.2
All Groups .....	250.7	270.7	292.1	232.9	252.0	268.1

The 'All Groups' index for Adelaide and each of the other State capitals is shown in the following table. It is emphasised that these numbers reflect price changes within each individual city, but they do not measure differences in the level of prices between cities.

**Price Index of Materials Used in House Building**  
**All Groups, State Capital Cities**  
**(Base of each Index: 1966-67 = 100-0)**

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Weighted Average Six State Capital Cities
1974-75 .....	189.4	178.4	187.0	195.4	172.4	179.1	183.4
1975-76 .....	211.1	200.1	218.5	222.5	201.9	209.2	208.1
1976-77 .....	234.5	223.6	243.5	250.7	229.8	235.1	232.9
1977-78 .....	254.0	238.6	265.1	270.7	253.4	256.7	252.0
1978-79 .....	272.7	251.4	281.3	292.1	268.2	273.6	268.1

**Price Index of Materials Used in Building Other than House Building**

This Index was introduced in April 1969. It measures changes in prices of selected materials used in the construction of buildings other than houses and low-rise flats. It is a fixed weights index, the composition of which is in accordance with the materials usage in building projects selected as representative for the purpose: such usage was derived from reported values of each material used in selected representative buildings constructed in or about 1966-67. Thus the reference base of the Index is the year 1966-67 = 100-0. The weighting base corresponds broadly with the reference base, but does not exactly coincide because of the nature of the data from which the weights were derived.

Prices are collected at the mid-point of the month to which the Index refers, or as near thereto as practicable. They relate to specified standards of each commodity and are obtained in all State capital cities from representative suppliers of materials used in building.

The 'All Groups' index for Adelaide and each of the other State capitals is shown in the following table. It is emphasised that these numbers reflect price changes within each individual city, but they do not measure differences in the level of prices between cities.

**Price Index of Materials Used in Building Other than House Building**  
**All Groups, State Capital Cities**  
**(Base of each Index: 1966-67 = 100-0)**

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Weighted Average Six State Capital Cities
1974-75 .....	176.0	180.6	186.6	181.0	176.7	179.3	179.2
1975-76 .....	199.0	209.4	216.3	210.4	208.3	210.4	206.2
1976-77 .....	221.5	234.8	241.2	234.3	235.4	234.8	230.3
1977-78 .....	239.9	254.4	260.9	254.2	258.3	253.7	249.7
1978-79 .....	259.2	271.4	278.6	274.4	276.8	270.5	268.1

Further information on the method of compiling the Index may be found in the publication *Price Index of Materials Used in Building Other than House Building* (Catalogue No. 6407.0). A full description of the Index is given in *Labour Report No. 58, 1973.*

**Price Index of Materials Used in Building Other than House Building**  
(Base of each Index: 1966-67 = 100.0)

Group	Adelaide			Weighted Average Six State Capital Cities		
	1976-77	1977-78	1978-79	1976-77	1977-78	1978-79
Concrete, etc. ....	209.0	232.2	250.0	215.6	235.3	254.8
Cement products .....	259.0	291.8	314.7	244.7	268.4	285.2
Bricks, stone, etc. ....	242.7	264.3	286.5	224.0	241.0	256.6
Timber, joinery, etc. ....	273.6	291.0	312.0	243.6	263.2	278.8
Steel and iron products .....	250.1	271.9	289.6	251.7	273.4	291.9
Aluminium products .....	206.9	223.3	244.9	213.7	230.8	244.6
Other metal products .....	202.2	202.4	236.3	195.0	198.1	228.4
Plumbing fixtures .....	254.1	270.8	271.2	251.2	263.7	260.2
Miscellaneous materials .....	208.7	224.4	241.7	204.2	221.9	234.2
Electrical installation materials .....	199.6	215.3	242.6	199.6	215.3	242.6
Mechanical services components .....	225.4	247.0	267.8	225.4	247.2	268.2
Special purpose index (a) .....	239.6	259.6	278.9	234.5	253.9	270.9
All Groups .....	234.3	254.2	274.4	230.3	249.7	268.1

(a) All groups excluding electrical installation materials and mechanical services components.

**COMMODITY PRICES**

**Retail Prices of Food**

The next table shows the average retail prices of selected food items in Adelaide during recent years. Items included are those which are considered identical or sufficiently comparable from place to place to warrant publication of comparative prices.

**Average Retail Prices of Selected Food and Grocery Items, Adelaide**

Item	Unit	1976	1977	1978	1979
				Cents	
Milk, bottled, delivered .....	600 ml	18.7	20.4	22.4	24.3
Cheese, processed .....	250 g	47.1	50.1	55.8	58.0
Butter .....	500 g	81.8	86.4	90.0	93.5
Bread, white loaf, sliced, supermarket sales .....	680 g	49.7	54.0	55.0	58.4
Biscuits, dry .....	225 g	34.9	38.3	41.5	44.3
Breakfast cereal, corn based .....	500 g	59.7	64.1	68.8	73.3
flour, self-raising .....	1 kg	35.1	38.8	41.8	44.0
Rice .....	500 g	30.2	33.4	36.3	36.8
Beef:					
Rib (without bone) .....	1 kg	188.3	211.4	251.5	387.3
Rump steak .....	1 kg	307.9	351.0	406.0	592.8
corned silverside .....	1 kg	195.5	221.0	268.5	408.3
sausages .....	1 kg	106.6	113.3	126.8	189.0

**Average Retail Prices of Selected Food and Grocery Items, Adelaide (continued)**

Item	Unit	1976	1977	1978	1979
Cents					
Lamb:					
Leg .....	1 kg	198.7	237.2	270.0	308.8
Loin chops .....	1 kg	228.1	280.2	325.0	372.8
Forequarter chops .....	1 kg	197.4	240.8	283.0	328.8
Pork:					
Leg .....	1 kg	321.5	339.7	358.8	412.8
Chops .....	1 kg	325.4	345.3	359.8	433.5
Chicken, frozen .....	1 kg	161.7	184.3	196.0	212.8
Bacon, middle rashes, pre-packed .....	250 g	107.0	113.9	122.5	142.5
Salmon, imported pink .....	220 g	79.9	97.4	97.3	104.0
Potatoes .....	1 kg	34.3	29.4	37.0	44.3
Onions .....	1 kg	43.4	41.0	45.8	49.3
Peaches, canned .....	825 g	57.8	60.9	63.3	69.3
Peas, frozen .....	500 g	56.5	61.0	61.0	62.3
Eggs (55 grams) .....	doz.	101.2	113.6	118.8	123.8
Sugar .....	2 kg	53.0	59.6	67.5	82.0
Tea .....	250 g	45.6	81.9	82.5	74.0
Coffee, instant, jar .....	150 g	153.8	277.4	285.3	259.3
Tomato sauce .....	300 ml	35.3	36.1	38.8	40.8
Margarine, table, poly-unsaturated .....	500 g	76.7	86.2	79.0	86.0
Baby food, canned .....	125 g	15.5	16.7	18.8	21.0

**Other Commodity Prices**

South Australian prices of agricultural products are shown in the table on page 402, and separate details of wheat, barley, wool and livestock are given under the appropriate headings in Part 9.1.

**PRICE CONTROL**

Following the outbreak of the 1939-45 War the Commonwealth Government, acting under the authority of the National Security Act, established price control in Australia. A Commonwealth Prices Commissioner was appointed and given extensive powers in the regulation of prices. The National Security Act expired at the end of 1946 but temporary legislation provided for the continuation of price control until the end of 1948.

During 1948 the Commonwealth Government held a referendum seeking authority for permanent control over prices and rents. However, the proposal was rejected and the States agreed to assume responsibility for price control. In South Australia the necessary administrative structure was established by the Prices Act of 1948. Provision was made for the retention of existing Commonwealth Government price regulation orders altered in accordance with the State Act.

Under the provisions of the Prices Act, 1948-1978 the South Australian Department of Public and Consumer Affairs determines maximum prices for controlled goods and services and investigates complaints concerning excessive prices for goods and charges for services whether subject to price control or not.

The Commonwealth Government held a further referendum in December 1973 seeking power to control the level of prices and incomes, but, as was the case in 1948, the proposal was rejected.

The Prices Justification Tribunal was established in August 1973 under the provisions

of the *Prices Justification Act* 1973. The Tribunal is a fully discretionary body appointed under the Act to consider the justification for proposed price increases put to it by companies subject to the Act. It is not a price regulating authority.

The Tribunal consists of a Chairman and such number of other members as are from time to time appointed in accordance with the Act. The Office of the Prices Justification Tribunal consists of persons appointed or employed under the *Public Service Act* 1922.

Further information on the Prices Justification Tribunal is contained in its Annual Reports to Parliament and pages 312-13 of the *Year Book Australia*, No. 61, 1975-76.

### RENT CONTROL

Rent control was introduced in South Australia at the beginning of the 1939-45 War, with the passing of the Increase in Rent (War Restrictions) Act, 1939, which pegged rents at the level prevailing at 1 September 1939. In 1942 this Act was replaced by the Landlord and Tenant (Control of Rents) Act. Although providing the same benchmark, this Act allowed the South Australian Housing Trust to determine a variation in rent, upon application by either the landlord or tenant, or in certain cases on its own initiative. An appeal against such a determination could be made to a Local Court. From the beginning of 1943 to the end of 1962, 60 180 applications for rent determinations were dealt with by the Trust, of which 29 were varied by a Local Court.

Following an inquiry held in 1951 on the future of rent control, proportionate loadings were introduced to allow for increases in property costs since 1939. The gradual relaxation of rent control was achieved through periodic extensions of these loadings and through the exclusion of long-term leases from the provisions of the Act.

At the end of 1962 the Landlord and Tenant (Control of Rents) Act was replaced by the Excessive Rents Act, which in turn has been repealed and incorporated into the Residential Tenancies Act, which came into operation on 1st December 1978. The Residential Tenancies Act introduced a general regulation of all aspects of the relationship between landlords and tenants. Administered by the Commissioner for Consumer Affairs, the Act established a Residential Tenancies Tribunal with exclusive jurisdiction to hear and determine a wide range of landlord and tenant disputes and empowered the Commissioner to investigate and report on all matters affecting the parties to residential tenancy agreements.

The Act also codified the existing common law of landlord and tenant by implying certain terms in all residential tenancy agreements. It proscribed undesirable practices by the creation of a range of offences and established prescribed procedures and forms covering the commencement, due performance and termination of agreements.

All security bonds received in respect of premises situated within the Metropolitan Planning Area of Adelaide must be paid to the Trubunal and are lodged in the 'Residential Tenancies Fund'.

### Sub-standard Housing

To regulate the rents for sub-standard housing the Housing Improvement Act, 1940-1977 vests in the South Australian Housing Trust power to declare a house sub-standard, and fix a maximum rent on it for such time as the declaration remains in force.

The Act provides that before the Trust declares any house to be sub-standard, it must notify the owner of its intention to do so and then allow a period of time for the necessary improvements to be made. If the house is subsequently found to remain in a sub-standard condition, a maximum rent fixation is made and then strictly controlled for such time as the house remains in a sub-standard classification.

In 1978-79 the Trust inspected 2707 houses, commenced proceedings under the Housing Improvement Act on 502 of these properties, and fixed maximum rents on 345 houses.

#### **Further References**

Additional information may be found in the following publications:

##### **Central Office**

6402-0 *Consumer Price Index, Monthly Food Group Index, Six State Capital Cities and Canberra*  
 6407-0 *Price Index of Materials Used in Building other than House Building*  
 6408-0 *Price Index of Materials Used in House Building*  
 6507-0 *Household Expenditure Survey 1974-75, Bulletin No. 1*

## **10.4 TRANSPORT**

A network of sea, rail, road and air services has been established between South Australia and the other States of Australia. Transport between the eastern States and Western Australia, and to a lesser extent Northern Territory, is made via South Australian services. Distances between Adelaide and other Australian capital cities, and Darwin, are shown in the following table.

**Distances Between Adelaide and Other Capital Cities**

Method of Travel	Canberra	Sydney	Melbourne	Brisbane	Perth	Hobart	Darwin
Kilometres							
Road (a)	1 206	1 410	737	2 047	2 721	..	3 169
Rail .....	1 620	1 656	777	2 643	2 655	..	..
Sea .....		1 833	949	2 761 (b)	2 509	1 436	(c) 5 799
Air .....	988	1 196	660	1 967	2 216	1 283	2 766

(a) In some cases shorter but less popular routes are available.

(b) To Fremantle.

(c) Via Fremantle.

### **TRANSPORT CONTROL AND OPERATIONS**

#### **STATE TRANSPORT AUTHORITY**

The State Transport Authority is constituted as a corporate body under the State Transport Authority Act 1974-1978. The functions of the Authority described in the Act include the following:

- (a) to co-ordinate all systems of public transport within the State;
- (b) to recommend to the Minister the manner and means by which the powers and functions of any prescribed body, in relation to public transport within the State, may be assumed by the Authority;
- (c) until a recommendation referred to in (b) above has been given effect to, to control and direct the activities of any prescribed body in relation to public transport within the State.

Subsequently, the South Australian Railways, the Municipal Tramways Trust and the Transport Control Board were determined to be prescribed bodies.

A recommendation as to the manner and means by which the Authority could assume the powers and functions of the prescribed bodies was made to the State Minister of Transport and given effect in legislation by the State Parliament. Under the new legislation, which was proclaimed in December 1975, the above mentioned prescribed bodies were dissolved and the assets, powers and functions of each were transferred to the Authority. An additional function was also conferred on the Authority of ensuring, as far as practicable, that adequate public transport services are provided within the State. The Authority, through its direct control of State-operated services and its regulatory control of privately-operated bus services, is empowered to co-ordinate public transport services in the State and ensure the optimum utilisation of the transport resources available.

From July 1975, by virtue of the Railways (Transfer Agreement) Act 1975 and the Railways Agreement (South Australia) Act 1975, the Australian National Railways Commission acquired the non-metropolitan portion of the South Australian Railways, *i.e.* the country and interstate passenger services and all freight services, subject to a number of conditions and controls exercised by the State. Facilities within the metropolitan area concerned with the handling of freight and the servicing and repair of rollingstock also became the property of the Commission. The State Transport Authority's railway system extends generally from Adelaide to the extremities of the metropolitan area at Outer Harbour, North Gawler, Belair and Noarlunga and includes interconnecting loops and branch lines. Under the terms of the Act the Commission and the Authority have the right to run their rollingstock over the railways of each other and the Commission is required to make available to the Authority, so far as is practicable, such numbers of employees as are agreed from time to time for work on the State metropolitan railway system. Separate agreements have been made between the two organisations which detail the terms and conditions of these arrangements.

The Authority continued to operate the South Australian non-metropolitan railways on behalf of the Commission until 1 March 1978, when management responsibility was transferred to the Commission. On the same date the former Rail Division and Bus and Tram Division of the Authority were merged, allowing the Authority to operate metropolitan public transport services as an integrated organisation.

The following table lists selected non-financial details for the years 1977-78 and 1978-79.

#### State Transport Authority: Selected Non-financial Details

Particulars	Unit	1977-78	1978-79
Total passengers carried .....	'000	69 304	70 526
Traffic kilometres (bus and tram) .....	'000 km	35 058	36 699
Train kilometres run .....	'000 km	3 981	3 950
Total route kilometres:			
Bus and tram .....	km	879.53	912.73
Rail .....	km	142.38	142.38
Personnel employed at 30 June (a) .....	No.	3 862	3 730
Rollingstock:			
Buses .....	No.	842	834
Tramcars .....	No.	26	26
Rail power cars .....	No.	110	110
Rail trailer cars .....	No.	30	24

(a) Includes staff made available by the Australian National Railways Commission—1 380 at 30 June 1978 and 1 275 at 30 June 1979.

From the beginning of the financial year 1978-79 State Transport Authority accounts are prepared on a combined basis with no financial differentiation between rail, bus and tram operations. However, non-financial data is collected for each transport mode.

The following summary shows details of income and working expenses for the year ended 30 June 1979.

#### State Transport Authority: Income and Working Expenses, 1978-79

	\$'000
<b>Income:</b>	
Traffic receipts .....	18 105
Sundry receipts .....	3 645
Interest on investments .....	2 800
Total income .....	24 550
<b>Operating cost:</b>	
Traffic operation .....	25 753
Maintenance .....	18 786
General expenses .....	9 976
Fuel, oil and power .....	2 933
Depreciation (a) .....	8 816
Interest on loans .....	4 779
Total operating cost .....	71 043
Excess of operating cost over Income .....	46 493
Contributions from South Australian Government .....	44 200
Net deficit .....	2 293

(a) Includes an amount of \$4.7 million representing Accumulated Depreciation from past years, brought to account in 1978-79.

#### METROPOLITAN PRIVATE MOTOR BUS SERVICES

Before 1974 there were several private bus route services licensed to operate in the Adelaide metropolitan area. In 1972-73, these services carried 16.6 million passengers. The transfer of most of these services to the State Transport Authority commenced in March 1974 and by 30 June 1979 only two private bus services were licensed to operate wholly within the metropolitan area. These two services operate over a total route length of 77 kilometres.

#### ROAD PASSENGER TRANSPORT CONTROL

##### Private Services

The control of road passenger transport is vested in the State Transport Authority in accordance with the provisions of the State Transport Authority Act, 1974-78. The Authority, through its direct control of State operated services and its regulatory control of privately operated bus services, is empowered to co-ordinate public transport services in the State and ensure optimum utilisation of the transport resources available.

Private operations are regulated via a licensing system which includes the issuing of licences authorising route service, tour and charter, community bus, school children and other special categories. Route service licences have a currency of seven years, with other licences having varied tenures ranging from single trip periods up to twelve months.

At 30 October 1979, current route service licences numbered twenty-seven. During the year ended 30 June 1979, 111 charter licences, 213 school children and handicapped children licences, nine workmen's licences, twenty-one special tourist licences and three

regular tourist licences were issued. In addition, four interstate services were licensed to carry passengers in remote areas where alternative services were not available. Other licences issued during the period (*i.e.* authorising shoppers services, airline ground services and miscellaneous operations) totalled fifteen.

### **Country Town Bus Services**

Commencing in May 1975, the State Government offered financial assistance through local government, to urban bus services outside the metropolitan area. Under the new arrangement, financial responsibility for the provision of bus services is vested in the local government authority, but the State Government contributes two-thirds of the operating loss.

Councils have the option of acquiring local bus fleets, or arranging for a local bus proprietor to provide the bus service under contract. In the case of the contract system, the fare revenue is retained by the local government authority and the contractor is paid an agreed sum per kilometre to operate buses on routes and timetables determined by a three-man management committee. The committee consists in each case of an elected Council representative, the Town Clerk or his deputy, and a representative of the State Government.

Contract services are operated in Port Pirie, Port Augusta, Port Lincoln and Mount Gambier. In Whyalla, the City Council has purchased the assets of the former bus proprietor, and since 30 October 1975, the bus service has been municipally owned and operated.

### **Interstate and Country Services**

Regular interstate coach services and special tours operate to all States. In addition, a network of bus route services operates on radial routes from Adelaide to all parts of the State. These services are provided by eleven private companies, under licence to the State Transport Authority and are operated from two adjacent terminals situated in Franklin Street, Adelaide. The services operate over a total route length of 7 082 kilometres.

Intrastate passenger route services on all routes are controlled by the State Transport Authority. Generally, pick-up and set down rights on the routes are non-competitive with rail services or with other route service operations. The Authority also regulates tour and charter operations within the State.

### **TAXI-CABS**

The Metropolitan Taxi-Cab Act, 1956-1978, administered by the Metropolitan Taxi-Cab Board, is the governing legislation providing for the control of taxi-cabs within the Metropolitan Planning Area as defined by Section 5(1) of the Planning and Development Act, 1966-1978, together with the whole of the Municipality of Gawler. The Board is responsible for the granting of licences or permits to operate taxi-cabs, the allotment of vehicles to stands and the charging of permit fees.

Regulations under the Act provide for the examination of taxi-cabs: all taxi-cabs are examined for roadworthiness, and all meters are checked and tested twice a year on the Board's premises by mechanics employed by the Board. It is compulsory for taxis to be fitted with meters which record progressively the cost of each journey at rates prescribed from time to time. At December 1979 the rates were 60 cents for 'flag fall' and the first 135 metres, then 5 cents each additional 135 metres. The area in which these metered charges apply is determined by the Board and is known as the 'metered area'. Outside of this zone but within a radius of 40 kilometres from the GPO Adelaide, a 50 per cent loading applies. For journeys which extend beyond the 40-kilometre radius contract

rates not to exceed 25 cents per outward and return kilometre are charged. From 8 p.m. to 6 a.m. Monday to Friday and from 8 p.m. Saturday to 6 a.m. Monday and on public holidays there is a 20 cent surcharge per journey.

Licences issued at 30 June 1979 include taxi-cabs, white plates (*i.e.* restricted) 250; green plates 593; hire cars 46; and funeral cars 10. Drivers' licences current totalled 2 919.

Taxi licence fees are \$50 a year and private hire licence fees are \$35. Revenue received by the Board during 1978-79 was \$42 250 from taxi licences, \$1 805 from hire car licences and \$24 258 from drivers' licences. Total revenue from all sources was \$159 094, and expenditure was \$161 491.

In areas not under the control of the Metropolitan Taxi-Cab Board, taxi licences are issued by local government authorities under the provisions of the Local Government Act.

## MOTOR VEHICLES

### Control of Road Traffic

Legislation covering the registration of motor vehicles, licensing of drivers and third party insurance in South Australia is contained in the Motor Vehicles Act, 1959-1978.

The present legislation for the control of road traffic in South Australia is set out in the Road Traffic Act, 1961-1979 and the Motor Vehicles Act, 1959-1978.

### Registration of Motor Vehicles

Under the provisions of the Motor Vehicles Act, 1959-1978 all motor vehicles, unless specifically exempted, must be registered with the Registrar of Motor Vehicles at the Motor Registration Division of the Department of Transport before being driven on any road.

The Motor Vehicles Act defines a motor vehicle as:

- (a) a vehicle, tractor or mobile machine driven or propelled by a steam engine, internal combustion engine, electricity or any other power not being human or animal; or
- (b) a caravan or a trailer;

but does not include a vehicle run upon a railway or tramway or a mobile machine controlled and guided by a person walking.

Permits to use vehicles, without registration, between farm blocks may be granted by the Registrar. A fourteen-day permit to drive a motor vehicle pending registration may be issued, under certain circumstances, by a member of the police force stationed at a police station more than 40 kilometres from the GPO, Adelaide, except in those places where a branch of the Motor Registration Division is in operation.

Registration fees vary according to the power-mass (PM) of the vehicle; this is calculated by a formula which takes into account the diameter of the cylinders, the number of pistons and the vehicle's mass in kilograms. A special formula applies for vehicles fitted with non-piston engines. Fees for trailers and caravans are based on unladen mass and vehicles fitted with solid rubber or metal tyres are subject to higher rates.

Motor vehicles used for certain purposes are registered without fee, *e.g.* vehicles owned by the Fire Brigades Board and other firefighting organisations, ambulances (for the use of which no charge is made), council vehicles used solely or mainly for the collection and transport of household refuse, etc. Registration at reduced rates is allowed for primary producers' commercial vehicles and tractors, prospectors' vehicles and for vehicles used wholly or mainly in outer areas. Reduced rates are available to

incapacitated ex-servicemen also, and to some persons who, as holders of State Concession Cards or pensioner entitlement cards, are entitled to travel on public transport in South Australia at reduced fares. Vehicles used solely for interstate trade can be registered for \$5 for a period of twelve months.

The Act provides for registered vehicles to carry number plates and for a registration label to be affixed to each registered vehicle. It also provides for the issue of general traders plates and limited traders plates.

### New Motor Vehicle Registration

New motor vehicle registrations during the financial years 1974-75 to 1978-79 are shown in the following table.

**New Motor Vehicle Registrations, South Australia<sup>(a)</sup>**

Type of Vehicle	1974-75	1975-76	1976-77	1977-78	1978-79
Cars .....	45 538	40 485	37 230	32 976	33 285
Station wagons .....	6 353	6 571	7 317	5 998	6 459
Utilities (b) .....	4 390	4 074	3 638	2 916	2 575
Panel vans (c) .....	2 684	3 204	3 156	2 917	2 209
Trucks (d) .....	3 201	3 695	4 148	3 643	3 043
Other truck type vehicles (e)	22	36	366	282	224
Buses .....	237	342	315	434	405
Motor cycles .....	8 256	7 052	6 081	4 313	3 699
Total .....	70 681	65 459	62 251	53 479	51 899

(a) Includes Commonwealth Government owned vehicles except defence services vehicles. (b) Includes utilities and trucks with carrying capacity under 1 tonne. From 1 July 1976 includes only vehicles described as utilities on registration documents. (c) Includes panel vans and trucks with carrying capacity under 1 tonne and ambulances and hearses. From 1 July 1976 includes only vehicles described as panel vans on registration documents; ambulances and hearses are included with other truck type vehicles. (d) Includes utilities, panel vans and trucks with carrying capacity over 1 tonne. From 1 July 1976 includes only vehicles described as trucks on registration documents. (e) Includes those truck type vehicles not designed for freight carrying e.g. tow trucks and fire engines. From 1 July 1976 includes ambulances and hearses.

### Motor Vehicles on Register

The following table shows the number of motor vehicles on the register at 30 June from 1975 to 1979.

**Motor Vehicles on Register, South Australia<sup>(a)</sup>**

At 30 June

Type of Vehicle	1975	1976	1977	1978	1979
Cars .....	413.3	429.3	447.5	458.5	465.5
Station wagons .....	70.0	71.8	74.4	75.5	76.4
Commercial vehicles .....	101.5	107.3	114.9	116.9	117.7
Motor cycles .....	32.5	32.6	31.2	30.5	29.7
Total on register .....	617.3	641.0	668.0	681.3	689.3
Population per vehicle .....	2.03	1.97	1.91	1.89	1.88

**Motor Vehicles on Register, South Australia<sup>(a)</sup>**  
**At 30 June (continued)**

Type of Vehicle	1975	1976	1977	1978	1979
			'000		
Tractors, plant, equipment .....	7.7	7.8	7.8	7.6	7.1
Trailers and caravans .....	128.0	138.3	148.6	151.8	155.8
Traders plates .....	2.8	3.1	3.2	3.5	3.1

(a) Includes Commonwealth Government owned vehicles except defence services vehicles.

### Drivers' Licences

From 19 March 1979, the following classes of drivers' licences have applied in South Australia:

- Class 1: to drive (a) any motor car or (b) any motor vehicle, the mass of which (excluding the mass of any trailer) does not exceed 3 000 kilograms, except an articulated motor vehicle, a motor cycle or a motor omnibus;
- Class 2: to drive any motor vehicle except an articulated motor vehicle, a motor cycle or a motor omnibus;
- Class 3: to drive any motor vehicle except a motor cycle or a motor omnibus;
- Class 4: to drive a motor cycle;
- Class 4A: to drive motor cycles up to 250 cubic centimetres engine capacity;
- Class 5: to drive a motor omnibus.

A licence may be endorsed with more than one class number.

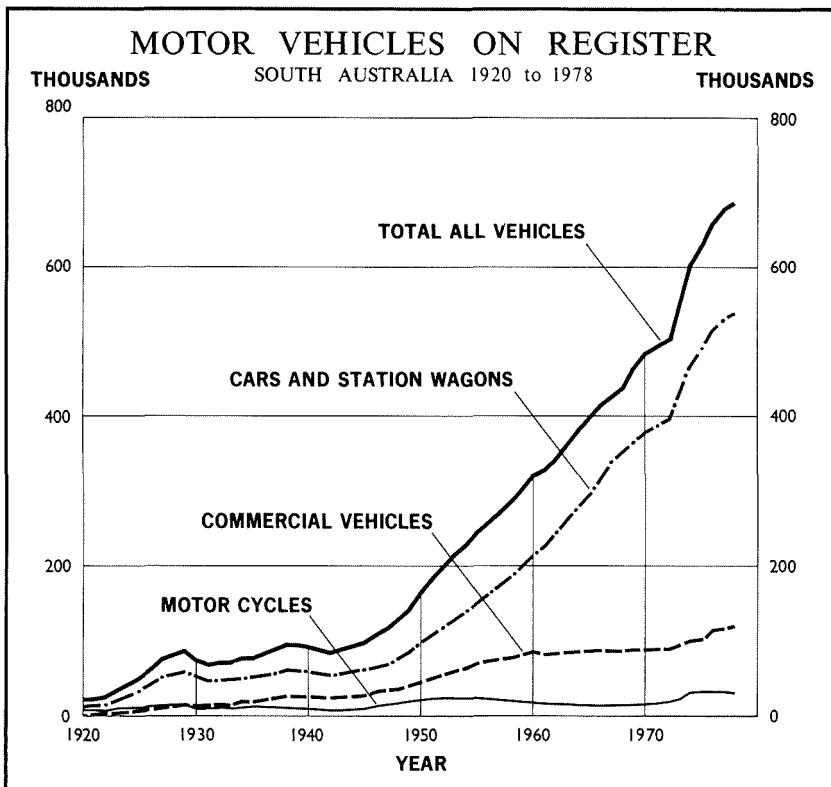
The Motor Vehicles Act provides that an applicant must apply for a permit to learn to drive a motor vehicle and will be issued with a learner's permit once he has passed a written examination on the rules of the road. The permit is for a period not exceeding three months during which time the holder is expected to undergo a practical test conducted by a Motor Registration Division examiner. If he passes the test he will be issued with a certificate stating the type and make of vehicle used and that he was capable of driving this class of motor vehicle. He may then apply to the Registrar for the appropriate licence.

Provision is also made for the testing of drivers suspected of being incompetent or suffering from a disease or disability which may impair their ability to drive, and for the suspension of their licences should they fail the test. Persons who will reach the age of 70 years during the currency of their next licence are tested before that licence is issued. Optical tests also are imposed at age 75 years.

Before July 1976, licences were issued for a period of one year: from July 1976 three-year licences were introduced initially on a staggered basis so that some drivers were issued with one-year licences (\$6), some with two-year licences (\$12) and some with three-year licences (\$18). From July 1977 all drivers were issued with three-year licences except those aged 70 years and over who will have to continue renewing their licences annually subject to passing the required tests. The fee for a learner's permit is \$3. Licences and permits are not issued to persons under sixteen years of age.

In 1961 licences for motor driving instructors were introduced and are compulsory where instruction is given for reward. The licence fee is \$20 for a period of three years.

Drivers' and riders' licences current at 31 December 1979 totalled 737 410. The number in force first exceeded 100 000 in 1931, totalled 215 157 by 1951, 315 044 by 1957, and had risen to 447 985 at December 1965.



#### Revenue from Registrations and Licences

Revenue from registration fees and drivers' and riders' licence fees totalled \$49 591 000 in 1978-79. These fees are paid into Consolidated Revenue Account; but after deductions have been made for sinking fund and interest on loans raised for roads and bridges, and the administration expenses of the Highways Department and Motor Registration Division of the Department of Transport, the balance is paid into the Highways Fund.

#### Third Party Insurance

Under the Motor Vehicles Act, 1959-1978 every motor vehicle driven on a road, unless specifically exempted, must be covered by an insurance policy. This policy insures the owner of the motor vehicle and any other person who at any time drives the vehicle in respect of all liability that may be incurred in respect of the death of, or bodily injury to, any person caused by, or arising out of the use of the vehicle in any part of Australia.

Insurance must be effected with the State Government Insurance Commission, which is now the only approved third party insurer. Liabilities of the insurer, set out in the Motor Vehicles Act, include the liability to pay for emergency treatment and hospital

treatment to a person injured (including fatally injured) by or arising out of the use of an insured motor vehicle.

Where the driver of a motor vehicle has caused death or bodily injury in the use of that vehicle and the identity of the vehicle cannot be ascertained, then a person who could have obtained a judgment against the driver may recover by action against a nominal defendant appointed by the Minister of Transport and published in the Government Gazette. Payment by the nominal defendant is out of money contributed by the Commission.

A person claiming damages in respect of death or bodily injury caused by negligence in the use of an uninsured motor vehicle on a road may bring an action for the recovery of those damages against the nominal defendant. Payments made by the nominal defendant are recoverable from the driver of the motor vehicle or any person liable for the negligence of that driver.

An injured person may claim against his or her spouse where the spouse is an insured person and has caused that person bodily injury in the use of a motor vehicle.

A committee appointed by the Governor on the recommendation of the Minister of Transport having all the powers of a royal commission periodically inquires into and determines what premiums for third party insurance are fair and reasonable.

From 31 July 1979, premiums for private and business cars in metropolitan and country areas were increased by \$7 to \$105. Premiums for goods-carrying vehicles in the metropolitan area were increased by \$9 to \$126 while those in country areas were increased by \$6 to \$82. Premiums for primary producers' trucks in the metropolitan area were increased by \$3 to \$45 and those in country areas were increased by \$2 to \$23. Premiums for taxis in the metropolitan area were increased by \$28 to \$406. Premiums for omnibuses in the metropolitan area were increased by \$26 to \$370 while those in country areas were increased by \$5 to \$67. Premiums for omnibuses not used for hire, fare or reward, in the metropolitan area were increased by \$8 to \$111 while those in country areas were increased by \$4 to \$59. Premiums for other miscellaneous vehicles such as ambulances, tow trucks, mobile cranes, hearses, etc., in the metropolitan area were increased by \$5 to \$74 and those in country areas were increased by \$2 to \$30. Premiums for motor cycles with an engine capacity exceeding 250 cc in the metropolitan area were increased by \$10 to \$141 and those in the country areas were increased by \$5 to \$66. Premiums for motor cycles with an engine capacity not exceeding 250 cc in the metropolitan area were increased by \$4 to \$52 while those in the country areas were increased by \$1 to \$18.

#### **Motor Vehicle Usage**

In September 1976 a sample survey of motor vehicle usage during the year ended 30 September 1976 was conducted throughout Australia.

The survey population (motor vehicles on the register), from which the sample was drawn, was extracted from the registration systems of the Commonwealth Government and State motor vehicle registration authorities; it was then stratified on the basis of vehicle type, trucks being further stratified by tare weight and number of axles.

Of the vehicles selected for the sample, approximately 75 per cent, apart from buses, were trucks and other 'commercial' vehicle types, although this group made up only 16 per cent of the total number of vehicles registered. This emphasis in the sample was considered necessary because of the diversity of the truck sector.

Questionnaires were dispatched in September 1976 to the registered owners of the vehicles selected in the sample survey asking for details of vehicle usage. It should be noted that information about vehicle usage has generally been based on the recollection of respondents rather than reference to precise records.

A further sample survey was conducted in respect of the year ended 30 September 1979.

#### **Motor Vehicle Usage: Average Annual Distance Travelled, South Australia, 1976**

Type of Vehicle	Average Annual Distance Travelled		Average Annual Distance Travelled for Business Purposes	
Cars and station wagons .....	'000 km	SE %	'000 km	SE %
Cars and station wagons .....	15.0	(1.9)	11.7	(5.5)
Utilities and panel vans .....	15.0	(5.4)	13.2	(7.1)
Trucks:				
Rigid:				
Tare weight,				
Under 3 tonnes .....	12.6	(3.5)	12.1	(3.6)
3 and under 4 tonnes .....	10.7	(3.9)	10.5	(3.8)
4 tonnes and over .....	19.8	(3.2)	19.5	(3.2)
Articulated:				
Tare weight,				
Under 9 tonnes .....	25.8	(2.8)	25.6	(2.8)
9 and under 11 tonnes .....	55.4	(3.7)	55.0	(3.7)
11 tonnes and over .....	94.3	(2.2)	93.9	(2.2)
Other truck type vehicles .....	11.6	(9.5)	6.7	(17.4)
Motor cycles .....	6.1	(11.5)	3.5	(22.0)

Being based on a sample, these statistics may differ from the figures which would have been obtained from a complete census using the same questionnaires and procedures. Measure of such imprecision, standard errors (SE), are shown in the table as a percentage of the associated figure.

The following table shows details of average annual fuel consumption for South Australia.

#### **Motor Vehicle Usage: Average Rate of Fuel Consumption, South Australia, 1976**

Type of Vehicle	Average Rate of Fuel Consumption			
	Petrol		Diesel	
	litres per 100 km	SE %	litres per 100 km	SE %
Cars and station wagons .....	12.3	(1.0)	..	..
Utilities and panel vans .....	14.7	(2.4)	14.2	—
Trucks:				
Rigid:				
2 axles .....	25.7	(1.2)	28.1	(2.0)
3 axles .....	48.2	(6.7)	35.8	(2.9)
More than 3 axles .....	35.2	(6.8)	39.0	(7.6)
Axes not stated .....	16.3	(17.6)	14.2	—
Articulated:				
Less than 5 axles .....	51.6	(2.2)	47.0	(1.1)
5 axles .....	57.0	(4.5)	53.9	(1.1)
6 axles .....	42.0	(2.1)	63.6	(1.1)
More than 6 axles .....	..	..	68.4	(10.4)
Axes not stated .....	5.7	(7.0)	61.1	(5.6)
Motor cycles .....	..	..	..	..

Additional details relating to South Australia and Australia are shown in the bulletin *Survey of Motor Vehicle Usage, Twelve Months Ended 30 September 1976* (Catalogue No. 9208.0).

### Census of Motor Vehicles

A census of motor vehicles on the register in Australia at 30 September 1979 was completed during 1980: details relating to South Australia are shown in the bulletin *Motor Vehicle Census, 30 September 1979* (Catalogue No. 9301.4).

The following table classifies motor vehicles on register by type of vehicle and year of model at 30 September 1979.

**Motor Vehicles on Register: Type of Vehicle and Year of Model, South Australia  
30 September 1979<sup>(a)</sup>**

Year of Model	Type of Vehicle								'000
	Motor Cars	Station Wagons	Utilities	Panel Vans	Trucks	Other Truck Type Vehicles	Buses	Total (b)	
Before 1962	15.4	1.2	2.4	0.6	5.5	0.6	0.1	25.7	
1962-1964 ....	27.3	6.6	2.8	1.0	3.5	0.3	0.2	41.7	
1965-1967 ....	45.9	9.4	5.0	1.6	4.2	0.4	0.2	66.6	
1968 .....	22.5	3.7	2.1	0.7	1.8	0.2	0.1	31.0	
1969 .....	25.7	3.99	2.2	0.8	2.1	0.2	0.3	35.3	
1970 .....	29.3	4.1	2.5	1.0	2.1	0.3	0.2	39.3	
1971 .....	29.9	4.0	2.1	1.2	1.8	0.3	0.3	39.6	
1972 .....	29.3	3.9	2.6	1.2	2.0	0.3	0.2	39.5	
1973 .....	35.5	4.6	3.0	1.6	2.6	0.4	0.2	47.8	
1974 .....	38.6	5.5	3.5	2.0	2.6	0.4	0.2	52.9	
1975 .....	39.7	5.8	3.1	2.5	2.9	0.5	0.2	54.7	
1976 .....	39.5	7.1	3.5	3.0	3.7	0.5	0.3	57.8	
1977 .....	32.7	6.1	2.9	2.8	3.5	0.4	0.5	48.9	
1978 .....	32.0	5.8	2.6	2.5	3.2	0.3	0.3	46.9	
1979 .....	24.2	4.7	1.8	1.4	1.9	0.1	0.2	34.2	
Total (c) ..	467.4	76.4	42.0	23.8	43.2	5.0	3.6	691.8	

(a) Includes Commonwealth Government owned vehicles except defence services vehicles.

(b) Includes 30 380 motor cycles.

(c) Includes vehicles for which year of model is unknown.

### Road Traffic Board

The Road Traffic Board of South Australia, set up in 1960 under the provisions of the Road Traffic Board Act, 1960, is now constituted under the Road Traffic Act, 1961-1979; its functions are to:

- (1) make recommendations to the Minister on roads and traffic generally, on the use of traffic control devices and other measures to be taken to prevent road traffic accidents;
- (2) promote uniformity in the design and use of traffic control devices;
- (3) conduct research and collect statistics relating to road traffic accidents and other traffic problems;
- (4) disseminate information and advice on road safety and traffic laws and regulations;
- (5) investigate and report on proposals for alterations of and additions to traffic laws and regulations.

### Road Safety

Some recent moves towards greater road safety were detailed on pages 514-5 of the *South Australian Year Book 1973*. These mainly related to the operations of the new Road Safety Instruction Centre and the points demerit scheme.

The latter scheme has been in operation since 29 April 1971. In 1979 warning notices were sent to 20 288 drivers who had accumulated six or more demerit points and 2 725 drivers with twelve or more demerit points had their driving licences suspended.

Regulations under the Road Traffic Act require that any modification to a motor vehicle with a gross vehicle mass less than 4.5 tonnes (motor cycles excepted) must meet certain standards and that approval of the Road Traffic Board is necessary before certain types of modifications can be made.

All motor vehicles manufactured on or after 1 May 1971, must have affixed a compliance plate showing that the vehicle has been approved by the Australian Motor Vehicle Certification Board in regard to compliance with Australian Design Rules for Motor Vehicle Safety applicable to the year of manufacture. Road Traffic Board exemption from this requirement is limited to immigrants or local residents returning from overseas with a vehicle they wish to register privately in this State.

Following an amendment to the Road Traffic Act, a different interpretation of 'STOP' signs became operative on 1 March 1975. Under this legislation, a driver facing a 'STOP' sign must give way to all traffic whether it is coming from the left or from the right. Previously, drivers had to give way only to the traffic from the right. The legislation conforms with the National Traffic Code. Similar legislation is in force in most States.

In July 1975, a system of 'priority' roads was introduced in the State. Initially the main arterial roads in the Metropolitan area were proclaimed 'priority' roads; this will be progressively extended to national highways and rural arterial traffic routes.

'STOP' and 'GIVE WAY' signs are used to control side street traffic. A heavy broken white line across the mouth of the side street warns the motorists that the arterial road traffic has priority over traffic entering from the left or right.

The Road Traffic Act now requires a seat belt to be worn by the driver and passenger of a motor vehicle where seat belts are fitted irrespective of the year of manufacture of the vehicle. An amendment to the Act, which came into operation on 1 March 1977, greatly strengthened the penalty provisions of the Act. The penalties are classified into (a) general penalty offences which included the majority of offences and carry a maximum penalty of \$300 and (b) special penalty offences which deal with the more serious offences e.g. a driver convicted on a drink-driving offence for the first time can face the following charges (i) disqualification from holding a driver's licence for not less than six months and (ii) a fine of not less than \$300 and not more than \$600 or imprisonment for not more than three months.

### Road Traffic Accidents

Statistics of road traffic accidents are compiled from reports made to members of the South Australian Police Department by persons involved in such accidents. Section 43 of the Road Traffic Act sets out the obligations of the driver of a vehicle involved in an accident—he must stop his vehicle at once, render any assistance of which he is capable to anyone injured in the accident, state his name and address if requested to any person having reasonable grounds for such request, and report the accident to the Police as soon as possible, or at least within twenty-four hours of the accident. However, it is a defence against a charge relating to non-reporting of an accident if a defendant can prove either that he did not know that an accident occurred or that the only damage or injury resulting from the accident was to property and that a fair estimate of the damage did not exceed \$300.

For the purpose of these statistics, a road traffic accident is defined as an accident which occurs because of the presence of a vehicle on a road (or other public thoroughfare, e.g. public car park, beach) and which involves property damage exceeding \$300 or casualty; a casualty occurring if the accident resulted in:

- (1) the death of any person within a period of thirty days of the accident, or
- (2) bodily injury to any person to an extent requiring surgical or medical treatment.

With the introduction of a more comprehensive accident report form on 1 October 1967, statistics have become available as a result of a joint effort by the South Australian Police Department, the Road Traffic Board of South Australia and the Australian Bureau of Statistics. Before this date, the South Australian Police Department was the sole authority preparing statistics of road traffic accidents.

The following table shows summary details of road traffic accidents for the years 1974 to 1978. During 1978 the total number of recorded road traffic accidents increased by 1.2 per cent (from 49 168 in 1977 to 49 747 in 1978). The number of accidents which resulted in casualties increased by about 3 per cent (from 7 922 in 1977 to 8 160 in 1978).

Road Traffic Accidents, South Australia

Year	Total Accidents Recorded	Accidents Involving Casualties	Persons Killed	Persons Injured	Rate per 100 000 Motor Vehicles on Register (a)			Rate per 100 000 of Mean Population		
					Total Accidents Recorded	Persons Killed	Persons Injured	Total Accidents Recorded	Persons Killed	Persons Injured
1974 .....	39 633	9 469	382	12 725	6 808	66	2 186	3 208	31	1 030
1975 .....	44 964	8 793	339	12 020	7 297	55	1 951	3 589	27	959
1976 .....	46 041	8 090	307	11 082	7 169	48	1 726	3 649	24	878
1977 .....	49 168	7 922	306	10 781	7 362	46	1 614	3 851	24	844
1978 .....	49 747	8 160	291	11 209	7 300	43	1 645	3 863	23	870

(a) 'Motor vehicles on register' is the mean number for each year; includes Commonwealth Government owned vehicles except defence services vehicles; excludes road tractors and trailers.

The likelihood of sustaining serious injury when involved in an accident is more than eleven times higher for motor cycle riders than for drivers of motor vehicles: 58 per cent of motor cycle riders involved in accidents received medical or hospital treatment compared with 5 per cent of drivers of other vehicles. In the following table, the types of road users killed and injured are shown according to age groups for 1978.

Road Traffic Accidents: Age Groups of Casualties, South Australia, 1978

Age Group of Casualty (Years)	Drivers of Motor Vehicles	Motor Cyclists	Pedal Cyclists	Passengers	Pedestrians	All Other	Total
PERSONS KILLED							
Under 5 .....	—	—	—	3	2	—	5
5-16 .....	4	2	2	17	7	—	32
17-20 .....	26	10	1	26	6	—	69
21-29 .....	36	18	—	11	3	—	68
30-39 .....	14	3	1	5	1	—	24
40-49 .....	8	—	—	6	3	—	17
50-59 .....	13	—	1	4	12	—	30
60 and over .....	18	—	1	9	18	—	46
Total .....	119	33	6	81	52	—	291

## Road Traffic Accidents: Age Groups of Casualties, South Australia, 1978 (continued)

Age Group of Casualty (Years)	Drivers of Motor Vehicles	Motor Cyclists	Pedal Cyclists	Passengers	Pedestrians	All Other	Total
PERSONS INJURED							
Under 5 .....	—	—	4	171	41	—	216
5-16 .....	144	132	303	864	240	3	1 686
17-20 .....	1 054	616	49	813	78	—	2 610
21-29 .....	1 254	405	67	550	76	—	2 352
30-39 .....	710	83	33	240	45	—	1 111
40-49 .....	460	33	21	183	38	3	738
50-59 .....	380	22	24	172	62	1	661
60 and over .....	338	6	23	234	144	—	745
Not stated .....	272	106	29	601	80	2	1 090
Total .....	4 612	1 403	553	3 828	804	9	11 209

Drivers (including motor cyclists) under twenty-one years of age, representing only 12 per cent of licence holders at 30 June 1978, accounted for 20 per cent of drivers involved in accidents, 28 per cent of drivers killed and 32 per cent of drivers injured during 1978. For drivers aged twenty-one to twenty-nine years involvements were 23 per cent, deaths 36 per cent and injuries 28 per cent while their representation in the driving population was 25 per cent.

Pedestrians sixty years and over accounted for 19 per cent of pedestrians involved, 18 per cent of pedestrians injured and 35 per cent of pedestrians killed.

The following table shows casualties by type of road user for each of the last five years. In each of these years more motor vehicle drivers were killed or injured than any other type of road user.

## Road Traffic Accidents: Casualties, South Australia

Year	Drivers of Motor Vehicles	Motor Cyclists	Pedal Cyclists	Passengers	Pedestrians	All Other	Total
PERSONS KILLED							
1974 .....	151	46	17	110	58	—	382
1975 .....	136	30	14	98	61	—	339
1976 .....	116	41	9	86	55	—	307
1977 .....	108	42	9	96	51	—	306
1978 .....	119	33	6	81	52	—	291
PERSONS INJURED							
1974 .....	4 946	1 820	541	4 392	1 021	5	12 725
1975 .....	4 663	1 738	529	4 209	876	5	12 020
1976 .....	4 249	1 622	566	3 846	792	7	11 082
1977 .....	4 140	1 625	554	3 646	810	6	10 781
1978 .....	4 612	1 403	553	3 828	804	9	11 209

Details of road traffic accidents for 1978 according to time and day of occurrence are shown in the next table.

More accidents occurred on Fridays (8 943 accidents) and Saturdays (8 202) than on other days of the week and more accidents occurred between 4 p.m. and 6 p.m. than during any other two-hour period. More accidents occurred between 4 p.m. and 6 p.m. on Fridays than on other days in that period and more deaths resulted from accidents occurring on Saturdays (57) and Sundays (49).

**Road Traffic Accidents: Day of Week and Time of Occurrence  
South Australia, 1978**

Time of Occurrence	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
TOTAL ACCIDENTS								
After:	Until:							
Midnight	2 a.m. ....	110	111	107	151	260	700	804
2 a.m.	4 a.m. ....	34	36	40	38	80	224	288
4 a.m.	6 a.m. ....	26	21	18	15	35	81	91
6 a.m.	8 a.m. ....	469	448	432	459	457	121	113
8 a.m.	10 a.m. ....	846	866	807	796	888	571	215
10 a.m.	12 noon ....	751	699	765	753	878	1 297	520
12 noon	2 p.m. ....	745	733	770	802	845	941	634
2 p.m.	4 p.m. ....	952	910	997	999	1 256	843	828
4 p.m.	6 p.m. ....	1 472	1 457	1 477	1 580	1 871	1 144	966
6 p.m.	8 p.m. ....	606	564	634	910	1 076	1 074	613
8 p.m.	10 p.m. ....	311	340	353	510	643	565	339
10 p.m.	Midnight ....	219	254	259	345	654	641	194
Total .....	6 541	6 439	6 659	7 358	8 943	8 202	5 605	49 747
PERSONS KILLED								
After:	Until:							
Midnight	2 a.m. ....	—	—	1	5	2	6	15
2 a.m.	4 a.m. ....	1	—	2	—	4	1	7
4 a.m.	6 a.m. ....	—	2	1	1	—	—	2
6 a.m.	8 a.m. ....	2	2	—	2	1	2	1
8 a.m.	10 a.m. ....	—	1	1	4	1	4	3
10 a.m.	12 noon ....	1	2	4	—	3	3	5
12 noon	2 p.m. ....	2	3	2	1	2	3	2
2 p.m.	4 p.m. ....	7	2	5	7	3	4	5
4 p.m.	6 p.m. ....	8	6	3	12	6	8	6
6 p.m.	8 p.m. ....	3	4	3	6	9	11	1
8 p.m.	10 p.m. ....	6	7	3	—	5	7	—
10 p.m.	Midnight ....	—	8	2	8	7	8	2
Total .....	30	38	27	46	44	57	49	291
PERSONS INJURED								
After:	Until:							
Midnight	2 a.m. ....	38	33	44	66	107	209	290
2 a.m.	4 a.m. ....	15	10	10	17	24	77	129
4 a.m.	6 a.m. ....	6	7	4	4	18	29	32
6 a.m.	8 a.m. ....	103	111	87	97	114	33	51
8 a.m.	10 a.m. ....	177	138	132	129	149	97	48
10 a.m.	12 noon ....	110	107	124	116	126	213	131
12 noon	2 p.m. ....	112	147	100	117	129	218	166
2 p.m.	4 p.m. ....	204	158	226	164	210	224	241
4 p.m.	6 p.m. ....	270	266	275	274	339	320	335
6 p.m.	8 p.m. ....	159	123	178	201	293	306	167
8 p.m.	10 p.m. ....	82	91	79	149	181	205	91
10 p.m.	Midnight ....	64	91	103	125	184	213	67
Total .....	1 340	1 282	1 362	1 459	1 874	2 144	1 748	11 209

Although more than two-thirds of all accidents occurred between 6 a.m. and 6 p.m. the severity of accidents, judged on the basis of death and injury rates, was considerably greater during the 'night hours', as can be seen from the following table.

**Accidents and Casualties: Time of Day, Fatality and Injury Rates  
South Australia, 1978**

Time of Occurrence	Accidents Occurring	Persons Killed	Persons Injured	Persons Killed Per 100 Accidents Occurring	Persons Injured Per 100 Accidents Occurring
<b>After:</b> Until:					
Midnight	2 a.m. ....	2 243	29	787	1.3
	2 a.m. ....	740	16	282	2.2
	4 a.m. ....	287	7	100	2.4
	6 a.m. ....	2 499	10	596	0.4
	8 a.m. ....	4 989	14	870	0.3
	10 a.m. ....	5 663	18	927	0.3
	12 noon ....	5 470	15	989	0.3
	2 p.m. ....	6 785	33	1 427	0.5
	4 p.m. ....	9 967	49	2 079	0.5
	6 p.m. ....	5 477	37	1 427	0.7
	8 p.m. ....	3 061	28	878	0.9
	10 p.m. ....	2 566	35	847	1.4
Total ....	49 747	291	11 209	0.6	22.5

During 1978 there were 23 160 accidents at intersections (47 per cent of accidents reported) and approximately one-half of the total number of injuries occurred at intersections. However, of the 291 road deaths, 40 per cent were on straight roads compared with 30 per cent at intersections: a further 22 per cent of deaths occurred on bends or curves.

**Road Traffic Accidents: Features of Roadways on which Accidents Occurred  
South Australia, 1978**

Features of Roadway	Total Accidents Reported	Accidents Involving Casualties	Persons Killed	Persons Injured
<b>Intersection:</b>				
Controlled .....	13 788	2 107	46	3 026
Uncontrolled .....	9 372	1 816	42	2 534
<b>Other than intersections:</b>				
Straight road .....	19 378	3 059	116	3 982
Bend or curve .....	2 736	780	65	1 140
Railway level crossing;				
Controlled .....	104	26	—	34
Uncontrolled .....	69	15	3	16
Other location .....	4 300	357	19	477
Total .....	49 747	8 160	291	11 209

The following table shows the nature of accidents which occurred in 1978. Collisions between vehicles accounted for 71 per cent of all accidents and 45 per cent of deaths, while vehicles overturning or leaving the road and vehicles colliding with pedestrians

accounted for 6 per cent and 2 per cent of all accidents respectively. Vehicles overturning or leaving the road and vehicles colliding with pedestrians each accounted for 19 per cent of deaths.

#### Road Traffic Accidents: Nature, South Australia, 1978

Nature of Accidents	Total Accidents Reported	Accidents Involving Casualties	Persons Killed	Persons Injured
<b>Collisions between vehicles (a):</b>				
Head on .....	810	327	38	648
Rear end .....	14 168	1 407	12	1 862
Right angles .....	13 679	2 610	65	3 867
Other .....	6 806	516	15	711
<b>Vehicles:</b>				
OVERTURNING OR LEAVING ROAD (b) .....	2 882	1 151	54	1 587
COLLIDING WITH;				
Fixed object .....	3 481	862	48	1 137
Parked vehicle .....	6 407	311	4	396
Pedestrian .....	818	809	54	807
Other (c) .....	431	66	—	79
Passenger accidents .....	68	68	—	73
Other .....	197	33	1	42
<b>Total .....</b>	<b>49 747</b>	<b>8 160</b>	<b>291</b>	<b>11 209</b>

(a) Includes trains at railway level crossings, trams and vehicles stopped on carriageway.

(b) Includes collisions subsequent to vehicles leaving carriageway.

(c) Includes collisions with non-ridden animals, parked trailers, etc.

The following table shows the age group and sex of persons holding drivers' licences and permits at 30 June 1978 and involvements in accidents during 1978 of drivers and riders within the same classifications. In this table figures for involvements relate to accidents occurring in South Australia whereas licence and permit holders are those licences, etc., issued in South Australia, and the licences on issue at 30 June are only an approximation of the average for the year.

It should be noted in particular that these figures do not measure exposure to risk: for example they take no account of distances driven, times of day into which driving may be concentrated or traffic conditions during those times.

The following additional limitations should be observed when interpreting the figures:

- (i) All figures include permit holders; the accident involvement of permit holders, who are permitted to drive a vehicle only when accompanied by a fully licensed driver, appears, from an examination of the relevant data, to be significantly lower than that of fully licensed drivers. At 1 July 1978, there were 13 099 permit holders; of these 5 182 or 40 per cent were aged 16 years and 9 745 or 74 per cent of the total were aged 20 years or less: thus if permit holders and their involvements in accidents were excluded from the table, it could be expected that the involvement rates in the lower age groups would be higher than those shown.
- (ii) The number of involvements with ages not stated is high; and their age distribution, if known, might be different from that of known cases.

**Road Traffic Accidents: Age and Sex of Licensed Drivers and of Drivers and Riders  
Involved in Accidents, South Australia, 1978 (a)**

Age (Years)	Licensed Drivers Riders and Permit Holders at 30 June 1978 (b)		Accident Involvement of Drivers and Riders (c)		Accident Involvement Rate per 100 Licensed Drivers and Riders	
	Males	Females	Males	Females	Males	Females
Under 20 .....	41 072	26 605	12 060	3 264	29.4	12.3
20-24 .....	55 754	42 631	11 026	4 065	19.8	9.5
25-29 .....	54 354	43 641	7 421	2 984	13.7	6.8
30-34 .....	48 986	38 773	5 625	2 612	11.5	6.7
35-39 .....	37 963	28 709	4 335	1 905	11.4	6.6
40-44 .....	33 572	23 118	3 802	1 476	11.3	6.4
45-49 .....	33 965	21 166	3 919	1 239	11.5	5.9
50-54 .....	35 092	20 736	3 521	1 193	10.0	5.8
55-59 .....	29 946	17 061	2 792	812	9.3	4.8
60-64 .....	23 637	12 364	2 008	535	8.5	4.3
65-69 .....	17 940	8 338	1 318	392	7.3	4.7
70-74 .....	10 171	3 812	784	248	7.7	6.5
75-79 .....	4 839	1 577	433	133	8.9	8.4
80 and over ....	2 195	590	217	56	9.9	9.5
Not stated .....	—	—	10 966	2 870	—	—
<b>Total .....</b>	<b>429 486</b>	<b>289 121</b>	<b>70 227</b>	<b>23 784</b>	<b>16.4</b>	<b>8.2</b>

(a) Includes both licensed riders and permit holders.

(b) Details provided by Motor Registration Division, Department of Transport.

(c) Drivers and riders involved in more than one accident during the year are included once for each accident.

## SHIPPING

### Control of Shipping

The Commonwealth Parliament is empowered under the Constitution to make laws in respect of trade and commerce with other countries and among the States.

Navigation and shipping are regulated under the *Navigation Act* 1912 and the provisions of the Act apply to ships registered in Australia (except those engaged solely in the domestic trade of any one State) and other British ships whose first port of clearance and whose port of destination are within Australia. Other shipping Acts under the trade and commerce power are the *Sea-Carriage of Goods Act* 1924, the *Seamen's Compensation Act* 1911, the *Seamen's War Pensions and Allowance Act* 1940, the *Australian Coastal Shipping Commission Act* 1966, the *Australian Coastal Shipping Agreement Act* 1956 and the *Stevedoring Industry Act* 1956.

Shipping in South Australia is controlled by the *Navigation Act* 1912 and, where this does not apply, by the *Harbors Act*, 1936-1978 and the *Marine Act*, 1936-1976. Both of the State Acts are administered by the Department of Marine and Harbors.

### Registration of Ships

Registration of ships in Australia is in accordance with the *Merchant Shipping Act* 1894 of the Imperial Parliament, under sections which apply to the United Kingdom and all British dominions. Registration is not compulsory for vessels of less than 15 net tons engaged in river or coastal trade or for larger vessels not engaged in trade. Yachts and small trading vessels may be registered at the request of the owners as registration

facilitates the sale or mortgage of these vessels. An annual review of the register is carried out but some vessels whose present ownership or use cannot be traced, are retained on the register in the absence of any positive justification for their removal.

Four different measures of tonnage (gross, net, displacement, or deadweight) may be applied to a vessel. Gross tonnage is the total enclosed cubic capacity of the ship on a basis of 2.83 cubic metres a ton; net tonnage is the cubic capacity available for cargo in terms of 2.83 cubic metres a ton; displacement tonnage is the weight of water displaced by a ship; deadweight tonnage is the total weight of fuel, water, stores and cargo that a ship will carry. Passenger ships are commonly rated by the gross tonnage, cargo ships by their net tonnage, warships by their displacement tonnage and oil tankers by their deadweight tonnage.

The following table shows the number of vessels on the South Australian Register at 31 December 1979.

### Shipping, Vessels on South Australian Register At 31 December 1979

Net Tonnage	Steam and Motor			Sailing (Including Fitted with Auxiliary Power)			Barges, Hulks, Dredges, Etc. Not Self-propelled		
	Vessels	Gross Tonnage	Net Tonnage	Vessels	Gross Tonnage	Net Tonnage	Vessels	Gross Tonnage	Net Tonnage
Under 50 .....	111	5 301	2 344	139	2 307	1 944	—	—	—
50-99 .....	37	3 946	2 659	4	601	171	1	83	75
100-199 .....	9	2 105	1 452	2	678	313	1	179	179
200-499 .....	—	—	—	—	—	—	1	319	319
500-999 .....	5	6 417	3 466	—	—	—	1	762	760
1 000-2 999 .....	2	5 333	2 370	—	—	—	—	—	—
3 000 and over .....	—	—	—	—	—	—	—	—	—
Total .....	164	23 102	12 291	145	3 586	2 428	4	1 343	1 333

### Registration of Motor Boats

The Boating Act, 1974-1978 gives power to the South Australian Minister of Marine to regulate boating and other activities within South Australian waters. The main provisions of the Act refer to the registration of motor boats and the licensing of motor boat operators.

Any boat that is propelled by an engine, whether or not that engine is the main means of propulsion, must be registered and have its registration number displayed on the hull. The registration number consists of two letters followed by two digits and the letter 'S' denoting South Australia. From 1 November 1977 the annual registration fee is \$7. A registration must be renewed annually, but, for a boat that is less than 3.048 metres in length and powered with an engine that develops less than 5 horsepower, a renewal fee is not required. At 30 June 1979 there were 37 944 motor boats registered.

Only persons, sixteen years of age or older, may be issued with a motor boat operator's licence which remains in force without renewal unless cancelled or suspended under the Act or voluntarily surrendered. A person aged between twelve and sixteen years may be issued a permit to operate a motor boat subject to certain restrictions. At 30 June 1979 there were 61 000 motor boat operator's licence holders. The other main provisions of the Act deal with unseaworthy boats, wrecks and abandoned boats, speed restrictions, rules for water skiing, reckless and dangerous operation, and the reporting of accidents.

Details of the minimum safety equipment required to be carried in a motor boat are listed in the Act's Regulations; these vary according to the length of the motor boat and whether it operates in in-shore or off-shore waters.

### Shipping Search and Rescue

The Shipping Search and Rescue organisation (SAR), administered by the Department of Transport, co-ordinates the marine search and rescue operations for which the Commonwealth Government is responsible. The SAR also co-operates with the appropriate authorities in other marine emergencies.

### Shipping Arrivals at South Australian Ports

Shipping figures are based on returns rendered to the Collector of Customs by shipping companies, or their agents, in respect of trading vessels exceeding 200 net tons: each arrival at and departure from a South Australian port is recorded. The following tables relate to vessels which were classified as overseas vessels regardless of the division of trade on which the vessels were engaged at any particular time.

The table below shows arrivals of overseas vessels at individual Customs ports in South Australia.

**Shipping: Overseas Vessels Entered at Customs Ports, South Australia, 1978-79**

Port	Overseas via Ports in Same State		Overseas via Interstate Ports		Overseas Direct		Total	
	Number	Gross Tonnage	Number	Gross Tonnage	Number	Gross Tonnage	Number	Gross Tonnage
Ardrossan .....	10	'000	1	'000	3	'000	14	'000
Ballast Head .....	—	66	2	4	—	19	2	89
Port Adelaide (a) .....	45	426	345	1 085	132	761	522	2 272
Port Giles .....	11	98	2	21	—	—	13	119
Port Lincoln .....	30	250	12	116	24	235	66	601
Port Pirie .....	27	150	47	253	37	266	111	669
Port Stanvac .....	5	36	12	125	28	1 006	45	1 168
Rapid Bay .....	—	—	1	5	—	—	1	5
Thevenard .....	8	36	12	55	20	139	40	230
Wallaroo .....	18	146	5	41	16	147	39	334
Whyalla .....	2	12	19	174	15	136	36	322

(a) Inner and outer harbour.

The next table shows arrivals of vessels exceeding 200 net tons at selected Customs ports, according to country of registration of the vessels.

**Shipping: Country of Registration, Vessels Entered at Selected Customs Ports  
South Australia (a)**

Customs Port	Country of Registration	Vessels		Net Tonnage	
		1977-78	1978-79	1977-78	1978-79
Ardrossan .....	Australia .....	58	3	252 794	11 370
	Other countries .....	12	11	64 541	77 144
	Total .....	70	14	317 335	88 514
Port Adelaide .....	Australia .....	571	12	1 008 638	68 523
	Greece .....	20	31	149 760	272 854
	India .....	19	18	92 444	95 812
	Japan .....	56	80	288 872	455 627
	Liberia .....	56	47	389 712	382 979
	Norway .....	16	13	156 124	155 300
	Panama .....	73	75	348 354	392 275
	Singapore .....	53	54	232 301	258 090
	United Kingdom .....	101	34	394 451	328 136
	USSR .....	43	40	155 851	165 197
	Other countries .....	141	124	855 900	885 043
	Total .....	1 149	528	4 072 407	3 459 836

**Shipping: Country of Registration, Vessels Entered at Selected Customs Ports  
South Australia<sup>(a)</sup> (continued)**

Customs Port	Country of Registration	Vessels		Net Tonnage	
		1977-78	1978-79	1977-78	1978-79
Port Lincoln .....	Australia .....	68	—	199 125	—
	Greece .....	3	9	23 057	85 069
	Liberia .....	4	16	19 325	174 963
	United Kingdom .....	10	12	95 152	120 743
	Other countries .....	36	31	261 110	239 425
	Total .....	121	68	597 769	620 200
Port Pirie .....	Australia .....	51	—	371 192	—
	Greece .....	8	10	67 768	85 405
	India .....	19	22	90 246	121 177
	United Kingdom .....	17	15	115 496	110 378
	USSR .....	7	6	27 053	21 952
	Other countries .....	45	58	284 283	330 080
	Total .....	147	111	956 038	668 992
Port Stanvac .....	Australia .....	44	—	484 304	—
	Liberia .....	16	19	529 702	692 797
	United Kingdom .....	3	5	27 753	78 194
	Other countries .....	32	21	695 464	396 671
	Total .....	95	45	1 737 223	1 167 662
Thevenard .....	Australia .....	41	4	177 170	24 336
	Panama .....	4	11	11 060	41 332
	United Kingdom .....	7	4	62 250	31 705
	Other countries .....	4	22	17 870	138 626
	Total .....	56	41	268 350	235 999
Whyalla .....	Australia .....	121	2	621 828	18 290
	Liberia .....	7	6	80 452	65 099
	United Kingdom .....	15	6	119 609	56 728
	Other countries .....	38	24	424 271	204 842
	Total .....	181	38	1 246 160	344 959

(a) From 1978-79 includes only overseas ships.

### Overseas Shipping Cargo

Overseas shipping cargo statistics are compiled from returns submitted by shipping companies, or their representatives, to Customs Houses at each port in South Australia. A return is required for each movement of an overseas vessel into and out of a port except for naval vessels, yachts and other craft used for pleasure, foreign fishing vessels that neither load nor discharge cargo and vessels not exceeding 200 net tons.

Cargo is recorded in terms of either units of weight or units of volume depending on the basis on which freight is charged. The statistics show separate figures for cargo recorded in tonnes weight and cargo recorded in cubic metres. The aggregates for weight and volume cargo are not added to a figure for total cargo because they are unlike quantities, and comparisons of total cargo between ports, trade routes or periods of time could be affected by variations in the cargo mix and in the basis on which freight is charged.

The following figures show, for the years 1977-78 and 1978-79, particulars of cargo loaded in South Australia for discharge overseas, and of cargo discharged in South Australia from overseas, classified according to major trade areas.

**Shipping: Cargo Loaded in South Australia, Trade Area of Destination**

Cargo Loaded for Ports in—	1977-78		1978-79	
	Tonnes Weight	Cubic Metres	Tonnes Weight	Cubic Metres
<b>North America and Hawaiian Islands:</b>				
Northern Area;				
USA .....	41 311	5 197	108 052	2 451
Canada .....	179	2 429	499	1 017
Central America .....	59	15	—	—
Bermuda and Caribbean Area .....	5	10	—	2 524
South America .....	—	—	66 468	39
<b>Europe (excluding USSR):</b>				
North-western, Central and Baltic;				
United Kingdom .....	65 900	—	112 442	435
Other .....	254 150	1 706	232 283	2 517
Southern Area .....	54 068	435	79 652	425
USSR (in Europe and Asia) .....	91 035	150	52 604	—
Africa .....	129 050	21 875	143 413	24 265
Asia (excluding USSR) .....	2 101 204	553 040	2 793 031	436 622
Papua and New Guinea, New Zealand and Pacific Islands .....	174 267	33 589	254 746	1 317
Indian Ocean Islands and Antarctica ....	1 459	—	1 161	450
Total cargo loaded .....	2 912 687	618 446	3 844 351	472 062

**Shipping: Cargo Discharged in South Australia, Trade Area of Origin**

Cargo Discharged from Ports in—	1977-78		1978-79	
	Tonnes Weight	Cubic Metres	Tonnes Weight	Cubic Metres
<b>North America and Hawaiian Islands:</b>				
Northern Area;				
USA .....	21 586	15 502	63 412	28 962
Canada .....	65 846	39 981	96 673	42 919
Central America .....	—	—	—	—
Bermuda and Caribbean Area .....	300	—	1 620	—
South America .....	—	—	—	—
<b>Europe (excluding USSR):</b>				
North-western, Central and Baltic;				
United Kingdom .....	4 732	1 987	1 682	1 051
Other .....	17 340	34 277	7 840	39 026
Southern Area .....	7 169	6 381	16 523	7 702
USSR (in Europe and Asia) .....	—	13	20	—
Africa .....	33 048	1 574	1 554	2 396
Asia (excluding USSR) .....	2 288 643	196 581	2 250 927	239 445
Papua and New Guinea, New Zealand and Pacific Islands .....	127 679	18 913	318 725	4 126
Indian Ocean Islands and Antarctica ....	120 809	237	94 822	—
Total cargo discharged .....	2 687 152	315 446	2 853 798	365 627

### Cargo Handled at Major Ports

The South Australian Department of Marine and Harbors records details of cargo handled at major ports in this State and the following table shows details for each of the last five years.

**Cargo Handled: Major Ports, South Australia**

Port	1974-75	1975-76	1976-77	1977-78	1978-79
'000 tonnes					
American River .....	37	41	45	32	29
Ardrossan .....	541	744	596	653	722
Ballast Head .....	192	193	174	153	170
Kingscote .....	176	188	97	114	114
Klein Point .....	550	605	643	736	732
Port Adelaide .....	3 862	3 640	3 123	3 176	3 635
Port Augusta .....	11	—	—	—	—
Port Giles .....	119	145	102	40	68
Port Lincoln .....	970	783	617	491	759
Port Pirie .....	1 272	1 318	1 082	1 147	1 335
Port Stanvac .....	2 816	3 719	2 953	3 185	3 275
Proper Bay .....	48	33	23	19	21
Rapid Bay .....	229	228	267	309	436
Stenhouse Bay .....	5	—	—	—	—
Thevenard .....	924	630	609	589	787
Wallaroo .....	362	385	127	151	410
Whyalla .....	6 520	5 538	4 027	3 108	3 643
Total .....	18 634	18 190	14 483	13 904	16 138

Total cargo handled at major ports in South Australia increased from 13 904 000 tonnes in 1977-78 to 16 138 000 tonnes in 1978-79, an increase of 2 234 000 tonnes (16 per cent). American River and Klein Point both recorded small decreases in the amount of cargo handled, Kingscote recorded no change and all other ports recorded significant increases in the amount of cargo handled for 1978-79.

### Distances to Overseas Ports

Distances in kilometres from Port Adelaide to principal overseas ports are shown in the following table. Distances by sea from Port Adelaide to the ports of other Australian capital cities are given on page 483.

**Distances from Port Adelaide to Principal Overseas Ports**

Port Adelaide to:	Kilometres	Port Adelaide to:	Kilometres
<i>Africa;</i>		<i>Europe;</i>	
Cape Town .....	10 377	Liverpool .....	(a) 21 630 (b) 19 774
<i>Asia;</i>		London .....	(a) 21 705
Colombo .....	7 982	Marseilles .....	(b) 19 839
Djakarta .....	5 643	Naples .....	(a) 21 144 (b) 16 688
Hong Kong .....	8 856		
Singapore .....	6 510		(a) 21 663
Yokohama .....	9 780		(b) 15 940

**Distances from Port Adelaide to Principal Overseas Ports (*continued*)**

Port Adelaide to:	Kilometres	Port Adelaide to:	Kilometres
<i>New Zealand;</i>		<i>West Coast,</i>	
Auckland .....	3 769	San Francisco .....	13 653
Wellington .....	3 482	Vancouver .....	14 357
<i>North America;</i>		<i>Central America;</i>	
<i>East Coast,</i>		Panama .....	15 385
Baltimore .....	(a) 23 135 (c) 19 059	<i>South America;</i>	
Montreal .....	(a) 23 541 (c) 21 368	<i>East Coast,</i>	
New York .....	(a) 22 961 (c) 19 200	Buenos Aires .....	(d) 14 388
		Rio De Janeiro .....	(d) 15 901
		<i>West Coast</i>	
		Valparaiso .....	12 353

(a) Via Cape Town. (b) Via Suez Canal. (c) Via Panama Canal. (d) Via Cape Horn.

**CIVIL AVIATION****Control of Civil Aviation**

In Australia, civil aviation is subject to the Commonwealth *Air Navigation Act* 1920 and to regulations made under the Act. The South Australian Air Navigation Act, 1937 provided for 'the application of Commonwealth Air Navigation Regulations to, and in relation to, air navigation within the State of South Australia'. The regulations under the Commonwealth Act were drawn up to give effect to the 1944 Chicago Convention on Civil Aviation. Regulations based on the resolutions of the Paris Convention in 1919 were no longer adequate in the years after the 1939-45 War because of the immense wartime development of aerial transport.

The present regulations, administered by the Department of Transport, cover the registration of aircraft and the issue of certificates of airworthiness; the licensing of aircraft services, aircraft operating crews, aerodromes, and flying training schools, and the rules of the air. The Department is responsible for the operation of Air Traffic Control and has assumed responsibility for co-ordination of search and rescue operations.

Under the *Australian National Airlines Act* 1945 the Australian National Airlines Commission was established and empowered to operate Commonwealth Government owned air services. The Commission operates under the name Trans-Australia Airlines.

The *Civil Aviation Agreement Act* 1952 ratified an agreement between the Commonwealth Government and Australian National Airways Pty Ltd to ensure the efficient and economical operation of air services within Australia by eliminating wasteful competition between that company and Trans-Australia Airlines and to rationalise the services of both airlines. The *Civil Aviation Agreement Act* 1957 was enacted to extend the privileges and obligations of the 1952 Act to the new proprietor of the major private airline after the purchase of Australian National Airways Pty Ltd by Ansett Transport Industries Ltd. The Commonwealth Parliament passed the *Airlines Equipment Act* in 1958 and this provided for further financial assistance to both airlines for the purchase of new aircraft and empowered the Commonwealth Government to limit the aircraft capacity being provided on competitive routes by these two operators.

The Airlines Agreement approved by the *Airlines Agreement Act* 1961 consolidated all

the arrangements and principles developed by the Government over the past decade for maintaining and securing the competitive airline system and made important arrangements affecting the introduction of new aircraft on Australian domestic routes. The *Civil Aviation Agreement Act 1952*, amended by the 1961 Act, is now cited as the *Airlines Agreement Act 1952*.

For reference to international agreements on civil aviation see the *Year Book Australia* No. 48, and for references to international organisations see *Year Book Australia* No. 37.

### Aircraft on Register

The total number of aircraft listed at 30 June 1979 on the Australian register was 5 997. The following table shows figures for registered aircraft based in the South Australia-Northern Territory Region, classified by type of operation.

**Aircraft Based in South Australia-Northern Territory Region**  
**Type of Operation**

Type of Operation	At 30 June				
	1975	1976	1977	1978	1979
Regular public transport (a) .....	11	9	9	9	9
Private .....	247	272	327	370	413
Charter .....	130	123	131	151	163
Other (b) .....	116	114	127	133	142
Total .....	504	518	594	663	727

(a) Excludes major airlines servicing interstate routes.

(b) Includes agricultural work, ambulance, survey and pilot training functions.

### General Air Services

Adelaide has no direct links by air with overseas: these are provided through Sydney, Melbourne, and Perth. However, it is on the scheduled flights of regular interstate services from Sydney, Melbourne, Perth, Canberra and Darwin.

Adelaide is also the terminus for intrastate services. Regular connections are made to various centres in the state by Ansett Airlines of South Australia and other approved commuter operators. A map showing air routes in South Australia appears on page 509.

Since 1966-67, when the Commonwealth Government approved introduction of commuter services in country areas, there has been a significant increase in regular air services between country towns and areas which are either not served by the major airlines or had no direct air service with Adelaide or the nearest major provincial city. Such services usually utilise single or twin engined aircraft and operate to fixed and published time-tables.

The first commuter service in Australia, between Adelaide and opal fields at Andamooka and Coober Pedy, commenced during 1966-67. This service was later extended to Ayers Rock, and now also services a number of remote localities *en route*.

### Passengers and Freight Carried

The number of passengers and the tonnage of freight carried on civil airlines in South Australia are shown in the following table.

**Principal Airports, South Australia**  
**Passengers, Freight and Aircraft Movements**

Airport	1974-75	1975-76	1976-77	1977-78	1978-79
PASSENGERS (a)					
Adelaide (b) (c) .....	1 425 860	1 454 917	1 607 238	1 761 932	1 801 084
Kingscote .....	61 121	58 887	51 963	65 072	65 242
Port Lincoln .....	61 737	65 498	63 628	69 731	69 354
Woomera .....	14 032	8 876	5 872	4 777	3 953
Whyalla .....	41 267	42 939	37 173	42 621	43 980
Mount Gambier .....	30 148	33 748	33 620	31 433	39 779
FREIGHT—TONNES (d)					
Adelaide (b) (c) .....	18 957	16 390	18 849	19 841	21 539
Kingscote .....	142	133	117	142	128
Port Lincoln .....	121	130	134	144	145
Woomera .....	90	64	35	20	16
Whyalla .....	133	108	95	86	80
Mount Gambier .....	98	102	100	90	89
AIRCRAFT MOVEMENTS (e)					
Adelaide (c) .....	24 225	23 978	24 354	32 288	25 863
Kingscote .....	2 081	2 239	1 898	2 108	2 175
Port Lincoln .....	2 325	2 332	2 220	2 374	2 422
Woomera .....	458	361	n.a.	188	152
Whyalla .....	1 432	1 540	1 396	1 496	1 449
Mount Gambier .....	1 567	1 753	1 592	1 300	1 734

(a) Total of embarkations and disembarkations. (b) Figures of passengers and freight movements are overstated to the extent of through traffic transferring between flights. (c) Includes Edinburgh Airfield. (d) Total of freight loaded and unloaded. (e) Total of arrivals and departures.

### Civil Aviation Accidents

During 1978-79 there were two civil aviation accidents involving casualties in South Australia and these resulted in the death of one person.

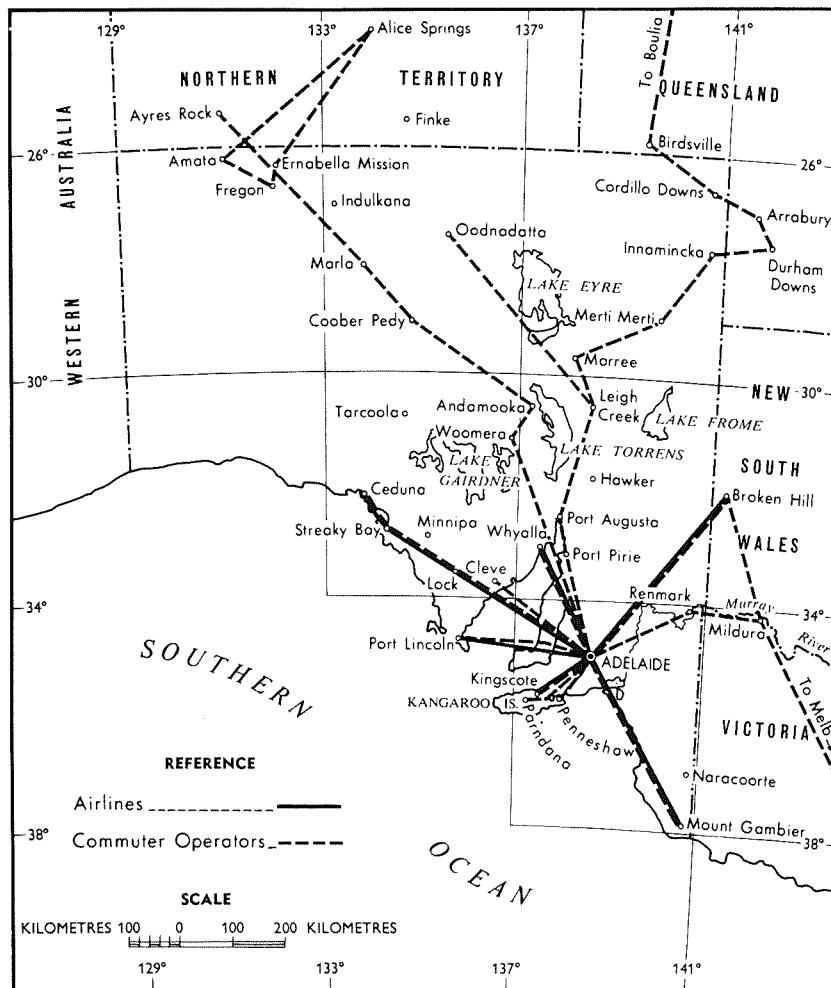
The table below shows the details of civil aviation accidents involving casualties during the ten year period 1969-70 to 1978-79. There were no accidents involving regular public transport during this period.

**Civil Aviation Accidents Involving Casualties, South Australia**  
**1969-70 to 1978-79 (a)**

Class of Operation	No. of Accidents	Persons Killed	Persons Injured
Charter .....	4	15	2
Training .....	3	—	3
Private .....	24	51	8
Gliding .....	7	3	4
Other .....	1	—	1
Total .....	39	69	18

(a) Excludes parachutists killed or injured on contact with earth after an uninterrupted fall.

# SOUTH AUSTRALIA AIR SERVICES



## 10.5 COMMUNICATION

As a result of Federation all the former colonial post and telegraph services were taken over by the Commonwealth Government on 1 March 1901 and until 1 July 1975 were controlled, pursuant to the provisions of the *Post and Telegraph Act 1901*, by the

Postmaster-General through the Postmaster-General's Department. A detailed history of Posts, Telegraphs and Telephones was included on pages 469-70 of the *South Australian Year Book 1967*.

In February 1973 a Commission was established to conduct an inquiry into what changes, if any, should be made in the organisation, administration and operations of postal and telecommunication services. In their Report, presented in April 1974, the Commissioners recommended establishment of separate postal and telecommunication corporations independent of the jurisdiction of the Public Service Board.

As a result of the Government's acceptance of this recommendation the Australian Telecommunications Commission and the Australian Postal Commission took over from the Australian Post Office on 1 July 1975 under the provisions of the *Telecommunications Act 1975*, the *Postal Services Act 1975*, and the *Postal and Telecommunications Commissions (Transitional Provisions) Act 1975*.

### POSTAL SERVICES

The Australian Postal Commission, trading as Australia Post, was formed on 1 July 1975, to provide Australia's postal services.

Major extensions to Australia Post Courier, already operating in all Australian capital cities, were made in South Australian country areas and the Northern Territory in 1978. Thirteen major centres, Murray Bridge, Mount Gambier, Millicent, Naracoorte, Bordertown, Port Lincoln, Whyalla, Port Augusta, Port Pirie, Kadina, Berri, Loxton and Renmark, began a reciprocal courier service with Adelaide. An Adelaide-Alice Springs courier service was introduced in April 1978 and the service was extended during the year to cover connections between Adelaide, Alice Springs, Darwin, Katherine and Tennant Creek. In July 1978 an overnight courier service connecting Darwin with all Australian capital cities was introduced, followed by the introduction of a courier service in Darwin and its metropolitan area.

A new road mail service was introduced in July 1978 between Adelaide, Alice Springs and Darwin, resulting in improved services to centres on that route including increased frequency of despatches and a faster mail flow.

Philatelic facilities were made available through several centres in 1978 including full facilities at Port Lincoln, Murray Bridge, Morphett Vale and Alice Springs and limited facilities at Victor Harbor and Salisbury.

Details of post offices for the years 1975 to 1979 are given in the following table.

**Post Offices: South Australia and Northern Territory**  
**Number at 30 June**

Particulars	1975	1976	1977	1978	1979
<b>Post Offices:</b>					
Official .....	171	171	171	169	166
Non-official .....	590	569	556	552	535
Total .....	761	740	727	721	701

Non-official post offices are conducted by persons who are not employed under the *Postal Services Act 1975* and who receive an allowance based on business transacted—in many instances this type of business is conducted in conjunction with some other business activity.

At 30 June 1979, there were 3 976 persons employed in postal services in South Australia and Northern Territory including 3 057 official staff employed under the *Postal Services Act 1975* and 675 non-official staff. In addition there were 244 mail contractors who held mail service contracts with Australia Post.

The Australia Post financial statements are prepared on an accrual accounting basis and in accordance with accounting principles generally applied in commercial practice. Gross postage receipts collected in South Australia and Northern Territory by Australia Post during 1978-79 totalled \$44.1 million including \$23.2 million from postage stamps, \$11.9 million from postal debtors and \$5.2 million from franking machines.

### Postal Articles Handled

Details of articles handled by post offices in South Australia and the Northern Territory during the years 1974-75 to 1978-79 are shown in the following table.

**Postal Articles Handled, South Australia and Northern Territory**

Year	Standard Articles (a)	Non-standard Articles (a)	Parcels (b)	Registered Articles	All Articles
'000					
<b>Posted for delivery:</b>					
Within Australia;					
1974-75 .....	186 909	25 967	1 642	589	215 107
1975-76 .....	156 073	20 989	1 362	438	178 862
1976-77 .....	150 738	18 873	1 322	363	171 296
1977-78 .....	156 052	17 517	1 784	412	175 765
1978-79 .....	172 208	19 677	1 570	342	193 797
Beyond Australia;					
1974-75 .....	4 453	316	82	89	4 940
1975-76 .....	8 408	365	68	67	8 908
1976-77 .....	9 688	370	73	62	10 193
1977-78 .....	6 497	398	73	56	7 024
1978-79 .....	5 863	385	78	64	6 390
Received from beyond Australia;					
1974-75 .....	6 569	2 288	110	36	9 003
1975-76 .....	5 975	1 840	224	33	8 072
1976-77 .....	6 582	1 679	225	35	8 521
1977-78 .....	5 802	1 634	95	34	7 565
1978-79 .....	5 700	1 541	95	29	7 365

(a) Includes Certified and Messenger Delivery mail. (b) Includes registered parcels.

### Postal Money Orders

In November 1977 a new money transfer service called Postal Money Orders was introduced. This service replaced the Money Order and Postal Order services previously operated by Australia Post.

The combined value of money orders and postal orders issued in 1944-45 amounted to \$4 929 000; in 1978-79 the value of postal money orders issued was \$39 225 451.

The combined value of money orders and postal orders paid in 1944-45 amounted to \$4 067 000; in 1978-79 the value of postal money orders paid was \$35 479 480.

**Postal Money Orders Issued and Paid  
South Australia and Northern Territory <sup>(a)</sup>**

Year	Issued		Paid	
	Number	Value	Number	Value
	'000	\$'000	'000	\$'000
1974-75 .....	2 403	27 235	1 970	23 301
1975-76 .....	1 592	25 621	1 268	21 709
1976-77 .....	1 210	25 195	931	22 087
1977-78 .....	981	30 138	766	27 350
1978-79 .....	1 034	39 225	785	35 479

(a) Before November 1977 includes combined Money Order and Postal Order services.

### TELECOMMUNICATION SERVICES

The Australian Telecommunications Commission (Telecom Australia) has responsibility for telecommunication services within Australia. On commencement the Commission had approximately 3.5 million telephone subscribers, net assets of \$4 000 million, a staff of 88 600 and a projected budget for 1975-76 of \$1 900 million.

During 1978-79 there was a considerable growth in the provision of services e.g. the telephone network increased by seven per cent, telex by fourteen per cent and 'Datel' by thirty-six per cent; the Commission in conjunction with Overseas Telecommunications Commission provided a new service, International Subscriber Dialling (ISD), to eighty three destinations. In addition, existing services are being improved e.g. modernisation of public telephone services including the provision of Subscriber Trunk Dialling (STD) from public telephones.

Cash receipts of Telecom Australia in South Australia and Northern Territory amounted to \$184.7 million during 1978-79 including \$173.5 million from telephone services, and \$6.9 million from telegraph services. Cash payments for the same period amounted to \$179.5 million including \$110.7 million for salaries and wages.

At 30 June 1979 there were 9 159 staff employed by Telecom Australia in South Australia and the Northern Territory including 8 525 permanent officers i.e. those employees whose employment is governed by the *Telecommunications Services Act* 1975. In addition there were 93 contract staff.

#### Telegraph System

Australia's telegraph service, known as TRESS (Teleprinter Reperforator Switching System) was first introduced in South Australia in 1959, before being extended to the other States. This system, using teleprinters and automatic switching apparatus, has eliminated the intermediate handling of telegraph traffic, resulting in greater speed and economy.

Another telegraph service known as TELEX has been available in South Australia since 1957. TELEX is a telecommunications system, similar to the telephone network, using teleprinter machines and providing a printed record of every message. Subscribers are provided with a teleprinter in their own premises and may be connected through the teleprinter exchange with other subscribers anywhere in Australia and in more than 100 overseas countries. At 30 June 1979 there were 2 833 subscribers in South Australia.

The Telecom Australia picturegram service is used to send and receive photographs to and from other parts of Australia and overseas. Photographs of documents, X-rays, and other matter capable of being photographed can be transmitted by this service.

Telecom Australia also provides a Datel service for the transmission of digital data between computer systems over private lines or the ordinary telephone network. The data are converted into a form suitable for transmission over a telephone type circuit by a 'modulator/demodulator' unit known as a 'Modem'. Before data are presented to the computer or terminal they are restored to their original form.

The number of telegrams dispatched and received, and some information on the operations of TELEX during the years 1974-75 to 1978-79, are shown below.

#### Telegraph Services, South Australia and Northern Territory

Year	Telegrams		Teleprinter Exchange	
	Dispatched within Australia	Dispatched beyond Australia	Sub- scribers	Number of Calls (a)
1974-75 .....	1 751	159	1 657	3 639
1975-76 .....	1 420	146	1 890	3 682
1976-77 .....	1 158	137	2 157	3 879
1977-78 .....	970	127	2 479	4 178
1978-79 .....	712	109	2 833	4 680

(a) Includes official Post Office traffic.

#### Telephone Services

Telecom Australia provides subscriber services, trunk line circuits and automatic telephone exchanges. There has been a continuous growth in these facilities and at 30 June 1979 there were 4 211 trunk line channels and 392 country automatic telephone exchanges in the State. There are sixty automatic exchanges in the Adelaide Telephone District. From 1 September 1978 the normal charges for selected telephone services are as follows:

Installation charge for a new telephone service is \$120 reduced to \$60 where an existing subscriber moves to other premises anywhere in Australia. If a telephone instrument and line are already *in situ* at the new address, the connection fee is further reduced to \$10. Annual rental charges are based on the facilities provided; where continuous exchange facilities exist the charge for a non-business service is \$85 or in the case of pensioners \$56-67, paid half-yearly in advance. The corresponding rental charges to subscribers with non-continuous exchanges are \$40 and \$26-66 respectively. Annual rental charges for continuous exchange and non-continuous exchange business services are \$120 and \$50 respectively. Approximately 99 per cent of subscribers now have continuous service.

Private calls between subscribers within a single telephone zone, and between subscribers in adjoining zones, are charged at a 'local call' rate of 9 cents per call. The corresponding charge for calls from public telephones is 10 cents. Trunk call rates, which vary according to duration and distances, are charged for calls between non-adjoining telephone zones: lower rates are charged for calls between 6 p.m. and 9 p.m.; between 9 p.m. and 8 a.m.; and in addition between 8 a.m. and 6 p.m. on Sundays.

A Telecom Australia objective is the establishment of a nationwide subscriber to subscriber direct trunk calling system known as subscriber trunk dialling (STD). The provision of STD facilities at telephone exchanges in South Australia has increased rapidly since its introduction in January 1967 and at 30 June 1979 STD facilities were

available to approximately 315 000 subscribers in the Adelaide Telephone District for two-way contact with selected exchanges in New South Wales, Victoria, Queensland, Western Australia and Tasmania.

#### Telephone Services, South Australia and Northern Territory

At 30 June	Telephone Exchanges	Telephone Services						Trunk Line Channels in Service (a)
		Ordinary Exchange	Duplex	Party Line	Private Branch Exchange	Public Telephones	Total	
1975 .....	670	270 036	2	870	37 818	3 078	311 804	2 829
1976 .....	667	289 875	2	804	41 128	3 139	334 948	3 031
1977 .....	667	317 270	2	714	40 184	3 164	361 334	3 367
1978 .....	664	346 211	—	642	40 875	3 124	390 852	3 586
1979 .....	642	368 673	—	534	48 498	3 166	420 871	4 211

(a) Excludes trunk junctions.

All metropolitan and outer metropolitan services are operated through automatic exchanges, whereas at 30 June 1979, 94 300 country and Northern Territory services were automatic and 11 600 services were manually operated. Metropolitan and outer metropolitan services totalled approximately 314 900 and of these 241 900 were non-business. In the country, business telephone services accounted for a larger share (about forty-three per cent) of services.

#### RADIO AND TELEVISION SERVICES

On 1 July 1975 Telecom Australia took over certain broadcasting responsibilities which had been vested in the former Postmaster-General's Department, under the *Broadcasting and Television Act* 1942. Telecom Australia is now required to provide and operate for the purposes of broadcasting and televising programs of the Australian Broadcasting Commission (ABC) the following:

- (1) transmitting stations (including translator stations) for the National and Radio Australia services;
- (2) interconnection facilities to connect each studio of the ABC to its appropriate local transmitting station;
- (3) technical equipment for the reception of broadcasting transmissions from other countries for re-broadcast by the ABC.

Telecom Australia is currently operating all transmitting station and program link facilities associated with the ABC's broadcasting services *viz*, medium frequency, high frequency inland, frequency modulation (FM), Television and Radio Australia (International). In addition, Telecom Australia is the construction authority for all new transmitting facilities required for these services.

A fixed station is established at a fixed location for the exchange of radio messages with other fixed stations whereas a land station is established at a fixed location for the exchange of radio messages with mobile stations. An outpost station is established in an outback area and communicates with control stations operated by such organisations as the Royal Flying Doctor Service. A space service is a radiocommunication service between earth stations and space stations, between space stations, or between earth stations when signals are retransmitted by space stations, or transmitted by reflection from objects in space.

The latest commercial television station, based at Loxton, was opened on 27 November 1976.

The first four stations of the National FM Broadcasting network began transmission on 24 January 1976. The high power stereo transmissions which serve Sydney, Melbourne, Canberra and Adelaide originate from the Australian Broadcasting Commission's Adelaide studios and are relayed over specially prepared lines.

Details of radio and television stations licensed in South Australia at 30 June in the years 1975 to 1979 are shown in the following table.

#### Radio and Television Stations, South Australia

At 30 June (a)

Radio Communication Stations	1975	1976	1977	1978	1979
<b>Broadcasting:</b>					
National .....	10	10	11	11	11
Commercial .....	8	9	9	9	9
Public (b) .....	1	1	1	1	1
<b>Television:</b>					
National .....	6	6	7	7	7
Commercial .....	5	5	6	6	6
<b>Transmitting and receiving:</b>					
<b>Fixed:</b>					
Outpost .....	190	218	223	208	211
Other .....	174	196	219	300	354
<b>Land:</b>					
Aeronautical .....	40	39	42	50	50
Base stations for mobile services	1 521	1 632	1 819	1 912	1 995
Coast .....	25	26	26	26	29
Experimental .....	78	79	82	110	106
Repeater .....	—	1	1	1	1
Mobile .....	19 219	20 922	23 413	43 777	45 671
Space services .....	1	1	1	1	1
Amateur .....	789	795	874	1 054	1 324
<b>Receiving only:</b>					
Fixed .....	21	22	22	22	21
Mobile .....	24	24	31	33	33
<b>Total stations .....</b>	<b>22 112</b>	<b>23 986</b>	<b>26 787</b>	<b>47 528</b>	<b>49 830</b>

(a) Excludes stations in Northern Territory.

(b) University of Adelaide station SUV.

Further information on radio and television services is contained in Part 6.4 Culture and Recreation.

#### OVERSEAS TELECOMMUNICATIONS SERVICES

The Overseas Telecommunications Commission (Australia), established by the *Overseas Telecommunications Act 1946*, is a Commonwealth statutory authority responsible for the establishment, maintenance, operation and development of all public telecommunications services between Australia and other countries, between Australia and its external territories and with ships at sea.

All communications into and out of Australia are transmitted by way of a complementary system of undersea coaxial cables, communications satellites and high-frequency radio.

The international public services provided by the Overseas Telecommunications Commission (OTC)—with the co-operation of the Australian Telecommunications Commission and telecommunications authorities in overseas countries—include the telephone (including International Subscriber Dialling), telex, telegram, phototelegraph and leased services of several types. Services providing document transfer by facsimile; data retrieval; and computer-to-computer high-speed data transmission, are also available to a number of overseas destinations. OTC also provides a television relay between Australia and those countries with access to satellite communications facilities.

OTC operates 15 coastal radio stations for communication with ships at sea in Australian waters, and to provide high-frequency radio services with ships in any part of the world. It also has five satellite earth stations in Australia. Those at Carnarvon in Western Australia and Moree in New South Wales operate through the INTELSAT Pacific Ocean satellites to Pacific region countries. The two earth stations at Ceduna in South Australia operate through INTELSAT's Indian Ocean satellites to Asia, Europe and Africa.

Details of the overseas telecommunications services and traffic are published in various issues of the *Year Book Australia*, e.g. No. 62, 1977-1978, page 532.

## PART 11

# PUBLIC FINANCE

## 11.1 STRUCTURE OF PUBLIC FINANCE

The collection of public revenue and the expenditure of public money in South Australia are the responsibility of four groups of authorities: (i) Commonwealth Government; (ii) South Australian Government; (iii) State public corporations; and (iv) local government.

The power to raise revenue from taxation is vested in the various governments and authorities by Acts of Parliament. Other revenue comes from the proceeds of the sale of goods and services to the public and to other governments and authorities. A major proportion of the revenue of the State Government, and a smaller proportion of the revenue of local government authorities and some public corporations is derived from grants from other levels of government. A further source of funds is the loan market; government securities are issued for loan raisings in Australia and overseas.

Authorisation for expenditure by Commonwealth and State Government departments is given by Appropriation Acts or by Special Acts of their respective Parliaments. Each State public corporation derives its authority for expenditure from the provisions of the specific Act under which it has been established. The Local Government Act, 1934-1979 contains sections relating to local government expenditure. The following sections of this part provide some details of the financial transactions of the government sector in South Australia. Special attention is given to transactions within the State Government budget, transactions of a number of public corporations and transactions of all local government authorities. In addition, details of some Commonwealth Government expenditures are included.

### Commonwealth Government Transactions

Reference is made to the revenue and expenditure of the Commonwealth Government only to the extent that it affects the finances of the State Government. As indicated in more detail below, not all of the transactions listed relate directly to the State Budget; many of the items are negotiated wholly through State Trust Funds. The transactions which are included represent only a small proportion of total expenditure by the Commonwealth Government within South Australia. A more detailed analysis of Commonwealth Government finance may be obtained from the *Year Book Australia*.

### State Government Accounts

Statistics relating to the State Government Budget are derived from accounts prepared by the Treasurer each year and included in the Report of the Auditor-General of South Australia. These accounts, which are on a cash basis, cover the Consolidated Revenue Account which in general terms is the current account of the Government, and the Loan Fund through which is handled all money raised by public borrowing; the receipt and disbursement of some special purpose Commonwealth Government grants are also handled through these accounts.

State Government Budget receipts include (in addition to loan raisings) taxation, proceeds of sale of goods and services by trading undertakings, some of the grants made by the Commonwealth Government, fees, rents, recoups and other sundry items. State Government disbursements are made for capital works, for provision of services (such as health, education and water supply), for general administrative expenses, and for interest and redemption payments.

The State Government Budget excludes many transactions negotiated through State Government Deposit and Suspense Accounts (including working accounts) and Trust Funds. The volume of such transactions is considerable. For example, transactions for roadworks are handled through the Highways Fund and transactions relating to forest operations are included in the Woods and Forests Working Account.

Some idea of the framework of the various funds may be obtained from the following table showing sources and disposal of funds in which the balances of Trust Funds and of Departmental Accounts appear.

### Government of South Australia, Sources and Disposal of Funds at 30 June 1979

Sources and Nature of Funds	\$'000
Public Debt:	
Securities current at 1 July 1978 .....	1 605 834
New Loans raised during 1978-79 .....	279 503
	<hr/>
<i>Less:</i> Securities redeemed and converted	1 885 337
	<hr/>
Public Debt at 30 June 1979 .....	1 702 221
Other interest bearing indebtedness:	
Trust Fund balances .....	21 036
Liabilities to Commonwealth Government;	
Housing Agreements .....	553 479
Other .....	163 243
Non-interest bearing indebtedness:	
Trust Fund balances .....	49 671
Departmental balances and other funds	96 447
	<hr/>
	2 586 097

**Government of South Australia, Sources and Disposal of Funds at 30 June 1979 (continued)**

\$'000

**Disposal of Funds****Loan Account:**

Total of Loan Works at 1 July 1978 .....	1 601 363
Payments during 1978-79 .....	237 821
	<hr/>
	1 839 184
<i>Less:</i> Repayments .....	51 418
Securities cancelled .....	25 316
Other credits (a) .....	62 284
	<hr/>
	139 019
Loan Works Account balances at 30 June 1979 .....	<hr/>
	1 700 165

**Consolidated Revenue Account:**

Deficit at 1 July 1978 .....	6 453
Receipts for Year .....	1 264 705
Payments for Year .....	1 258 252
	<hr/>

Surplus for Year .....

6 453

Deficit/surplus at 30 June 1979 .....

—

**Rural Industry Assistance Agreement:**

Advances to primary producers .....	26 312
	<hr/>
Housing Agreements:	
Advances to SA Housing Trust .....	313 144

Advances to Home Builders Accounts .....	215 533
	<hr/>

528 677

**Water Treatment Agreement:**

Advances to Adelaide Water Treatment Scheme Fund .....	22 841
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**Land Acquisition:**

Advances to SA Land Commission .....	73 480
Other Agreements .....	95 239
Cash at bank and short-term deposits .....	139 383
	<hr/>
	2 586 097

(a) Comprises Capital Works Grant, in lieu of loan raising.

**Public Corporation Accounts**

Most of the details included under this classification are based on the Auditor-General's annual reports prepared for a number of public corporation business undertakings, including those engaged in banking. Information is given from both revenue statements and balance sheets.

**Local Government Accounts**

Details included for local government authorities are based on annual statements prepared on an income and expenditure (accrual) basis in accordance with the 'Local Government Accounting Regulations, 1967'. Details of loan raisings are based on returns furnished separately.

### Consolidated State and Local Government and Public Corporations Accounts

Any analysis of financial transactions of the Government sector would be incomplete without a comprehensive consolidation of all levels and funds of Government.

The tables which follow show figures on a consolidated net basis for State and local government and public corporations in South Australia for the four years to 1977-78. Net figures are those for which expenditures within a given classification have been reduced to the extent of any relevant receipt (and *vice versa*); and consolidated figures are those for which inter-authority, inter-level and inter-fund transactions are eliminated on consolidation of those authorities, levels and funds.

**State and Local Government Authorities and Public Corporations  
South Australia, Receipts and Financing Items**

Particulars	1974-75	1975-76	1976-77	1977-78
\$ million				
<b>Receipts:</b>				
Taxes, fees, fines, etc. ....	295.2	366.3	423.4	444.0
Income from public enterprises ....	18.6	57.4	52.2	45.9
Property income;				
Interest .....	33.3	40.0	51.4	56.4
Land rent, royalties .....	5.6	6.2	7.4	8.7
Total property income ....	38.9	46.2	58.8	65.1
<b>Grants from the Commonwealth Government:</b>				
For current purposes .....	444.8	607.3	674.5	800.3
For capital purposes .....	151.6	164.9	161.9	161.1
Total receipts .....	949.0	1 242.0	1 370.8	1 516.4
<b>Financing items:</b>				
Net borrowing;				
Local authority and public corporation securities .....	33.3	43.5	52.4	61.7
Other general government securities .....	6.7	5.1	7.5	17.3
Net advances from the Commonwealth Government;				
For loan works purposes .....	79.8	92.8	99.0	103.4
Other .....	87.2	93.7	75.6	88.6
Net receipts of private trust funds	2.5	6.3	9.9	10.1
Reduction in;				
Cash and bank balances .....	—19.9	—81.2	—23.6	27.9
Security holdings .....	—2.4	—1.6	2.1	—0.1
Other funds available (including errors and omissions) .....	28.4	36.9	48.3	41.8
Total financing items .....	215.8	195.7	271.3	350.7
<b>Total funds available .....</b>	<b>1 164.8</b>	<b>1 437.7</b>	<b>1 642.1</b>	<b>1 867.2</b>

State and Local Government Authorities and Public Corporations  
South Australia, Outlay

Particulars	1974-75	1975-76	1976-77	1977-78
Final consumption expenditure .....	549.5	724.4	886.3	1 029.3
Gross capital formation:		\$ million		
Increase in stocks .....	3.3	1.4	3.9	4.7
Expenditure on new fixed assets ....	383.4	464.3	480.7	507.5
Expenditure on existing assets (net)	41.4	32.1	34.1	20.5
Total gross capital formation	428.2	497.8	518.7	532.7
Transfer payments:				
Interest .....	130.1	139.2	162.5	190.8
Transfer to persons .....	16.5	18.0	17.4	18.2
Subsidies .....	0.9	1.3	1.8	2.2
Grants for private capital purposes	7.1	11.8	13.0	11.3
Total transfer payments .....	154.6	170.3	194.7	222.4
Net advances:				
To the private sector .....	6.6	8.5	11.6	48.0
To public financial enterprises .....	25.9	36.7	30.9	34.7
Total net advances .....	32.5	45.2	42.5	82.7
<b>Total outlay .....</b>	<b>1 164.8</b>	<b>1 437.7</b>	<b>1 642.1</b>	<b>1 867.2</b>
Current outlay .....	697.0	882.9	1 068.0	1 240.4
Capital outlay .....	467.8	554.8	574.2	626.8

## Further References

Additional information may be found in the following publications:

## South Australian Office

5501.4 *Public Finance*

## Central Office

5504.0 *State and Local Government Finance, Australia*

## 11.2 COMMONWEALTH-STATE GOVERNMENTS FINANCIAL RELATIONS

The Commonwealth of Australia Constitution Act and the 1927 Financial Agreement represent significant events in Commonwealth-State financial relations. Under the former, the States surrendered the right to levy customs and excise duties which passed exclusively to the Commonwealth and under the latter, the Commonwealth became the borrowing agent for the States. Further details appear on page 537 of the *South Australian Year Book* 1972.

Since Federation the Commonwealth has made payments of various descriptions to the States. Before the 1939-45 War, Commonwealth payments were confined, for the most part, to special grants to assist the financially weaker States and to certain specific

purpose grants relating to such matters as Commonwealth assistance for roads and contributions under the Financial Agreement.

Since the 1939-45 War there has been a marked increase in the amount and variety of Commonwealth assistance to the States. This has reflected, among other things, increases in the range and variety of government activities which have accompanied economic and social developments in this period of rapid growth of the Australian economy; greater participation by the Commonwealth in matters which were previously considered to be the sole responsibility of the States; and the effects of the introduction and continuation of uniform tax and of other changes on the basic allocation of financial resources between the Commonwealth and the States.

There are various ways of classifying Commonwealth payments to the States. They may be classified as 'capital' as opposed to 'current' transactions; to general purpose grants compared with payments for purposes specified by the Commonwealth; or in accordance with the constitutional authority under which the payments are made. Many of the recently introduced grants have been for specified purposes and instituted under Section 96 of the Commonwealth Constitution.

#### SPECIAL GRANTS

The Constitution provides, in Section 96, for the granting of special financial assistance to the States. Before 1933 financial assistance of varying amounts was granted to South Australia, Western Australia and Tasmania.

In 1933 the Commonwealth appointed the Grants Commission, of three members, to inquire into and report upon claims made by any State for a grant of financial assistance and any matters relevant thereto. From 1933 to 30 June 1959 applications were lodged by each of the three States already mentioned. South Australia ceased to be a claimant State from 1 July 1959; and at the Premiers' Conference in June 1968, following a request from Western Australia, it was agreed that (subject to certain considerations) claims by Western Australia would cease after payments in respect of 1967-68 leaving Tasmania as the only claimant State during 1968-69 and 1969-70. Following the Premiers' Conference in June 1970 the Government of South Australia decided to again submit a claim; it did this on 6 July 1970. On 30 September 1971 Queensland also made application for a special grant. In 1974, following the Commonwealth's agreement to provide additional financial assistance, Tasmania withdrew from the special grants system. In June 1975, as part of the agreement to transfer its non-metropolitan railway network to the Commonwealth, South Australia again withdrew from the special grants system. On 30 June 1978 Tasmania applied for a special grant in respect of 1977-78 but subsequently withdrew its application.

#### PERSONAL INCOME TAX SHARING ENTITLEMENT

Financial assistance grants, formerly called tax reimbursement grants, made up the bulk of the assistance provided for general revenue purposes before 1976-77 and were determined annually on the basis of an agreed formula. From 1976-77 the financial assistance grants were replaced by personal income tax sharing arrangements.

The income tax sharing arrangements with the States have been introduced in two stages. Under Stage 1, which commenced in 1976-77, the States receive a specified proportion of the net income tax collections made under the *States (Personal Income Tax Sharing) Act 1976*. Under Stage 2, in addition to the personal income tax imposed by the Commonwealth, each State has the right to impose a surcharge or grant a rebate on personal income tax in its State. The Commonwealth remains the sole collecting and administrative authority for all personal income tax. Relevant legislation is the *Income Tax (Arrangements with the States) Act 1978*.

Under the *States (Personal Income Tax Sharing) Act 1976*, the States are entitled to receive in respect of 1976-77, 33.6 per cent of net personal income tax collections in the year, in respect of 1977-78 a fixed amount of \$4 336.1 million and in respect of each subsequent year 39.87 per cent of collections in the preceding year. This is subject to the guarantee that the State's Stage 1 entitlements in any year are not less, in absolute terms, than in the previous year and that, in the years 1976-77 to 1979-80, their entitlements will not be less in a year than the amount which would have been yielded in that year by the financial assistance grant formula as laid down in the *States Grants Act 1973*.

A periodic review of relativities between all States is planned with the first review to be made before 30 June 1981: the same timing applies to the periodic review of the tax sharing arrangements as a whole.

### SPECIAL REVENUE ASSISTANCE

From time to time the Commonwealth has provided general revenue assistance to the States in addition to that payable under the personal income tax sharing entitlements or by way of special grants recommended by the Grants Commission.

A Premiers' Conference was held in February 1975 to discuss special revenue assistance for 1974-75. The Commonwealth agreed to provide the States with an additional \$60 million of which South Australia received \$6.6 million. As part of arrangements for the transfer of the non-metropolitan railway system of South Australia and the railway system of Tasmania to the Commonwealth, payments classified as special revenue assistance were made to the two States during 1974-75. South Australia received \$10 million and Tasmania \$5 million. No such grants have been made since 1974-75.

### CAPITAL GRANTS

At the June 1970 Premiers' Conference the Commonwealth undertook to provide a portion of the State's Loan Council programs in the form of capital grants. As a result of the *States Grants (Capital Assistance) Act 1970*, the Commonwealth distributed \$200 million to the States in 1970-71 in the same proportions as their borrowing programs.

The *States Grants (Capital Assistance) Acts* passed in 1972 provided for additional grants by way of capital assistance to the States for government primary and secondary schools during 1971-72 and 1972-73.

These grants continued in the following years but from 1975-76 the capital grants have constituted one-third of each State's total Loan Council Program. During 1978-79, the Commonwealth paid grants totalling \$478 million to the States, including \$62.3 million to South Australia.

### OTHER FINANCIAL ASSISTANCE

In addition to grants under the Financial Agreement, special grants recommended by the Grants Commission, personal income tax sharing entitlements, special revenue assistance and capital grants, the Commonwealth makes payments to the States for many specific purposes, some details of which are given in this section.

Figures in the following table are those which have been published in the latest issue of the budget paper 'Payments to or for the States, the Northern Territory and Local Government Authorities' and show the general pattern of Commonwealth Government payments to or for the State of South Australia for 1978-79 and four earlier years. Some amounts shown are repayable to the Commonwealth Government but repayable advances for war service land settlement are not included.

## Commonwealth Payments To or For the States, South Australia

Particulars	1968-69	1975-76	1976-77	1977-78	1978-79
\$'000					
Personal income tax sharing entitlements (a) .....	112 768	363 091	433 200	507 761	559 841
Special grants .....	—	2 500	—	—	—
Special revenue assistance .....	3 350	—	—	—	—
Loan Council borrowings .....	77 840	112 950	118 637	124 569	124 569
Capital grants .....	—	56 475	59 318	62 284	62 284
<b>SPECIFIC PURPOSES PAYMENTS: RECURRENT PURPOSES (\$'000)</b>					
Sinking fund on State Debt .....	2 835	4 000	3 911	4 191	4 483
Schools .....	—	27 452	35 038	38 566	39 746
Technical and further education .....	—	3 770	4 502	4 737	5 116
Universities .....	4 351	43 107	51 000	56 872	57 917
Colleges of advanced education .....	623	28 838	38 221	41 724	42 477
Pre-schools and child care .....	—	5 025	5 601	6 184	5 588
School dental scheme .....	—	2 549	3 099	3 686	2 814
Public hospitals running costs .....	—	92 367	69 394	101 659	104 287
Employment grants .....	—	2 400	—	—	—
Regional employment development scheme .....	—	3 294	—	—	—
Aboriginal advancement .....	—	2 165	2 515	3 045	3 404
Assistance for Local Government .....	—	6 785	11 925	14 220	15 433
Other .....	4 208	13 577	15 821	16 978	18 504
Total recurrent purposes ...	12 017	235 330	241 026	291 861	299 769
<b>SPECIFIC PURPOSE PAYMENTS: CAPITAL PURPOSES (\$'000)</b>					
Schools .....	1 415	11 056	14 672	17 069	16 178
Technical and further education .....	870	1 208	2 320	4 837	6 901
Colleges of advanced education .....	1 995	6 886	4 276	8 457	5 177
Universities .....	1 076	3 421	6 427	6 634	6 439
Hospitals .....	—	12 900	13 000	5 120	—
Rural adjustment scheme .....	—	—	—	6 985	5 017
Aboriginal advancement .....	311	3 559	3 339	1 807	2 291
Housing .....	19 500	56 360	56 360	58 460	47 368
Growth centres .....	—	1 504	980	1 088	1 201
Land acquisition .....	—	19 892	10 352	11 507	6 712
Sewerage .....	—	5 700	1 002	—	—
Rural reconstruction .....	—	5 100	2 781	400	—
Natural disaster relief .....	—	108	—	12 132	4 929
Urban water supply .....	—	8 931	9 175	6 000	4 490
Roads .....	19 433	40 764	38 800	40 400	43 207
Railway projects .....	8 878	4 960	700	—	—
Urban public transport .....	—	6 757	4 420	3 790	4 110
Other .....	12 182	16 365	12 681	8 636	5 037
Total capital purposes .....	65 660	205 471	181 285	193 322	159 057

(a) Financial assistance grants to 1975-76; personal income tax sharing entitlements from 1976-77.

### Schools

The Commonwealth has been providing assistance for schools in the States since 1964-65 when it provided grants for science laboratories and equipment.

The range of assistance has been progressively extended and grants are being made for both government and non-government schools according to the following categories: general recurrent grants, general building grants, and grants for science laboratories and equipment, libraries, schools for the handicapped, disadvantaged schools, migrant children, teacher development, innovative projects and information programs.

The Schools Commission, established by the *Schools Commission Act* 1973, administers these programs of assistance.

From 1977 the fixed triennial system of the past was converted to a three-year rolling program. Under these arrangements a total of \$658.4 million (at estimated June 1979 prices) is expected to be provided in 1980 as the base program of assistance to the States for schools.

#### Universities

Grants to the States for recurrent expenditure of universities commenced in 1951-52; similar grants for capital works and equipment for universities were introduced in 1958. From 1 January 1974 the Commonwealth assumed full financial responsibility for universities.

The *Tertiary Education Commission Act* 1977 established the Tertiary Education Commission as a replacement for the Universities Commission, the Commission on Advanced Education and the Technical and Further Education Commission. From 1977 the fixed triennial system of the past was converted to a three-year rolling program. On this basis the financial assistance to the States for universities in 1980 is \$665.3 million (at estimated June 1979 prices).

#### Colleges of Advanced Education

Grants to the States for colleges of advanced education commenced in March 1965. These grants were initially for capital purposes but at the start of the 1967-69 triennium were extended to cover recurrent grants. Total grants for the three calendar years 1973 to 1975 were set at \$798.7 million. This estimate took into consideration the decisions of the Commonwealth to accept full financial responsibility for tertiary education and the abolition of tuition fees from 1 January 1974.

With the replacement of the fixed triennial system by the three-year rolling program, assistance in 1980 is \$469.5 million (at estimated June 1979 prices).

#### Public Hospitals Running Costs

The *Health Insurance Act* 1973 authorised the Commonwealth to enter into agreements with the States 'for the provision of hospital services' by the States. Payments to the States under this Act were suspended in May 1976 following legal advice that the agreements negotiated with the States were invalid. As an interim measure, until new cost-sharing arrangements were negotiated with the States, the *States Grants (Hospitals Operating Costs) Act* 1976 was passed; this Act authorised payments of up to \$315 million to the States to meet 50 per cent of net operating costs of hospitals incurred before 1 October 1976.

New cost-sharing arrangements under the *Health Insurance Act* 1973 became effective on 1 October 1976. The main change from the previous arrangements is that the Commonwealth now meets 50 per cent of budgets as approved by the Commonwealth and State Health Ministers. Total payments to the States in 1978-79 were \$1 030.2 million, of which South Australia received \$104.3 million.

### School Dental Scheme

In 1973, agreement was reached between the Commonwealth and the States in respect of a program to provide an Australia-wide School Dental Service. The capital and operating costs of training facilities for dental therapists and capital costs of school dental clinics were borne in full by the Commonwealth, while operation costs of the clinics were shared between the Commonwealth and the States on a \$3 for \$1 basis. From 1 July 1978, under the terms of a revised agreement, the Commonwealth will pay 50 per cent of the capital costs of all new facilities, 50 per cent of the operating costs of the training centres and 50 per cent of the operating costs of the school clinics.

During 1978-79 South Australia was granted \$3.5 million of a total payment to all States of \$18.0 million.

### Housing

Under successive arrangements between the Commonwealth and the States financial assistance has been made available to the States in one form or another since 1945-46 for the provision of housing, including assistance with home ownership, for families of low or moderate means.

Under the *Housing Assistance Act* 1978 three-year Housing Agreements were executed with the States to cover the period from 1978-79 to 1980-81. Advances are repayable over 53 years, as under earlier Agreements and concessional rates of interest apply—4.5 per cent per annum for funds directed to home purchase assistance and 5 per cent per annum for rental housing.

Total payments made during 1978-79 were \$335.5 million with South Australia receiving \$2.3 million in the form of grants (including pensioner housing grants of \$1.3 million) and \$47.4 million in the form of advances.

### Land Acquisition

The *Land Commissions (Financial Assistance) Act* 1973 authorised the provision of financial assistance to the States in respect of expenditure by approved State authorities on programs of land acquisition. South Australia was the first State to accept the principles of the Land Commission program and the South Australian Lands Commission began operating in 1973-74.

With the discharge of remaining commitments in 1977-78, this program came to an end. However, interest is being capitalised on advances in a similar manner as for growth centres.

### Rural Adjustment

The *States Grants (Rural Adjustment) Act* 1976 provides for the Commonwealth to make available assistance for the purposes of a Rural Adjustment Scheme that embraces debt reconstruction, farm build-up, farm improvement, carry-on finance, rehabilitation and household support. The scheme replaced the Rural Reconstruction Scheme, the Dairy Adjustment Program and the program of Carry-on Assistance to the Beef Industry, all of which were terminated on 31 December 1976. Wine-grape producers became eligible in 1978-79 for carry-on finance assistance.

Assistance given by the Commonwealth during 1978-79 was \$47.0 million with South Australia receiving \$5.0 million including \$4.2 million in the form of loans.

### Natural Disaster Relief

Before 1971 State Governments were generally expected to contribute on a \$1 for a \$1 basis in meeting relief expenditure. This was changed in 1971 so that, for major disasters, the Commonwealth met all expenditures by a State in excess of a certain base amount set

for that State. From 1978-79, above-base expenditures will be financed on a \$3 Commonwealth: \$1 State basis.

During 1978-79 total assistance to the States was \$27.0 million with South Australia receiving \$5.4 million. This assistance was for drought relief and included \$4.9 million in the form of loans.

#### **Urban Water Supply**

Payments amounting to \$32.9 million have been provided to South Australia since 1974-75 under the *Urban and Regional Development (Financial Assistance) Act* 1974 to assist construction associated with the Adelaide water treatment scheme; of this amount, \$4.5 million was paid in 1978-79.

#### **Roads**

Grants for road works have been made since 1923, and from 1931 to 1958 were based on a percentage of Commonwealth petrol taxation. A new scheme of assistance to the States for roads was established by the *Commonwealth Aid Roads Act* 1959 in which the Commonwealth undertook to provide assistance for five-year periods.

Over the period 1977-78 to 1979-80 the arrangements for providing assistance to the States for roads are embodied primarily in the *States Grants (Roads) Act* 1977. The arrangements initially were determined by the Commonwealth Government after consideration of a 'Report on Roads in Australia 1975' by the former Commonwealth Bureau of Roads.

Road grants in 1978-79 totalled \$508 million with South Australia receiving \$43.2 million.

#### **Urban Public Transport**

Since 1973-74 the Commonwealth has provided assistance to the States to meet certain costs of approved urban public transport projects. The current program of assistance is provided under the *States Grants (Urban Public Transport) Act* 1978.

During 1978-79 assistance of \$41.9 million was made available to the States with South Australia receiving \$4.1 million.

#### **Assistance for Local Government**

In 1973, new legislation passed by the Commonwealth Parliament laid down procedures for regional organisations of local government to apply for financial assistance from the Commonwealth. As a result of evidence placed before the Commonwealth Grants Commission, total grants of \$56.3 million in 1974-75 were recommended to be paid to local government authorities throughout Australia. South Australian authorities received \$4.8 million.

As part of the new personal income tax sharing arrangements between the Commonwealth and the States introduced at the beginning of 1976-77, a new agreement was reached for general assistance to local government authorities; this provided that local government authorities throughout Australia would receive 1.52 per cent of net personal income tax in each year. An amendment to the *Local Government (Personal Income Tax Sharing) Act* 1976 increased the entitlement to 1.75 per cent for 1979-80. From 1976-77

the Commonwealth Grants Commission has recommended the grant to be paid to each State for assistance to local government authorities in that State. State Grants Commissions subsequently apportion this among separate authorities with consideration to a per capita element and a needs element.

Assistance of \$179.4 million was made in 1978-79 with South Australia receiving \$15.4 million.

### 11.3 STATE GOVERNMENT FINANCE

State Government accounting in South Australia is on a 'cash' basis, revenue not being brought to account until received and expenditure until the actual disbursement is made. Receipts and payments fall into five main divisions, namely the Consolidated Revenue Account and Loan Account (which together constitute the budget sector), Special Commonwealth Advances, Trust Fund Accounts and Deposit and Suspense Accounts.

#### CONSOLIDATED REVENUE ACCOUNT

This account is credited with receipts from many items of State taxation, fees, licences and charges for services, recoveries of interest and sinking fund, personal income tax sharing arrangements (originally entitled financial assistance grants) and some other Commonwealth grants. The account is debited with the cost of revenue collection, legislative and administrative functions, interest and sinking fund on the public debt, provision of education, health, social security and welfare and other services, operation of business undertakings and development of State resources. The resultant balance represents the State's surplus or deficit on revenue for the year.

#### Consolidated Revenue Account, South Australia

Particulars	1939-40	1949-50	1959-60	1969-70	1978-79
			\$'000		
Receipts .....	25 511	58 721	160 555	338 498	(a)1 264 705
Payments .....	25 837	59 100	161 177	335 578	1 258 252
<b>Surplus (+) or deficit (-):</b>					
Current year .....	—325	—379	—622	+2 920	+6 453
Cumulative .....	+1 999	+3 215	—3 376	—4 579	—
<b>Per Head of Population</b>					
			Dollars		
Receipts .....	42.72	85.50	171.99	293.06	979.86
Payments .....	43.28	86.05	172.65	290.53	974.86

(a) Includes \$5 662 433 transferred from Loan Account.

#### Receipts

The receipts for the financial years 1975-76 to 1978-79 are shown in the following table.

## Consolidated Revenue Account: Receipts, South Australia

Source	1975-76	1976-77	1977-78	1978-79
\$'000				
Net taxation (a) .....	272 760	314 280	323 502	342 344
Business undertakings (b) .....	126 916	88 983	103 067	119 278
Territorial: Land sales, rents, etc. .....	3 661	4 236	5 238	5 787
Other:				
Interest and exchange .....	46 327	57 096	60 735	65 243
Fees, fines, rents, etc. .....	199 034	244 159	(c) 161 529	170 804
Commonwealth grants .....	388 287	465 271	513 125	561 249
Total .....	1 036 985	1 174 025	1 167 196	1 264 705

## Per Head of Population

		Dollars		
Net taxation(a) .....	217.08	247.70	252.09	265.24
Business undertakings .....	101.01	70.12	80.31	92.41
Territorial: Land sales, rents, etc. .....	2.91	3.34	4.08	4.48
Other:				
Interest and exchange .....	36.87	44.99	47.33	50.55
Fees, fines, rents, etc. .....	158.40	192.36	125.86	132.33
Commonwealth grants .....	309.03	366.65	399.85	434.84
Total .....	825.30	925.16	909.53	979.86

## Proportion of Total Receipts

		Per cent		
Net taxation(a) .....	26.30	26.77	27.72	27.07
Business undertakings .....	12.24	7.58	8.83	9.43
Territorial: Land sales, rents, etc. .....	0.35	0.36	0.45	0.46
Other:				
Interest and exchange .....	4.47	4.86	5.20	5.16
Fees, fines, rents, etc. .....	19.19	20.80	13.84	13.51
Commonwealth grants .....	37.45	39.63	43.96	44.38
Total .....	100.00	100.00	100.00	100.00

(a) Some items and amounts differ slightly from State Treasury classifications.

(b) For details see table on page 533.

(c) From 1977-78 excludes the activities of the South Australian Health Commission.

## Receipts and Outlay

The following two tables present a summary of transactions from Consolidated Revenue Account. The purpose classification shown is based on the purposes of

government recommended in the United Nations System of National Accounts. It is intended to bring together outlays with similar objectives to reveal more fully the broad purposes of public sector spending. The distinction between receipts and outlay corresponds to that embodied in the economic type classification which is designed to categorise transactions in a way which facilitates a study of the impact of government transactions on the economy. Dissections of the totals shown for education, health and social security and welfare are given in Parts 6.2, 6.5 and 6.6 of this publication. For further details of the classification see *Public Authority Finance—State and Local Authorities 1976-77* (Catalogue No. 5504.0) published by the Australian Statistician.

### Consolidated Revenue Account: Receipts and Outlay, South Australia, 1977-78

Purpose	Outlay (a) (b)				
	Purchases of Goods and Services	Current Grants to Private Non-profit Organisations	Less Charges for Goods and Services Supplied	Total (Including Other)	Total Receipts (a)
\$'000					
General public services:					
General administration n.e.c. ....	57 021	70	11 763	45 710	1 754
Law, order and public safety .....	85 701	880	9 169	81 313	9 390
Other general public services .....	—	19	—	19	—
Education .....	341 634	9 859	3 009	365 582	38 159
Health (c) .....	13 096	329	10 520	165 970	17 753
Social security and welfare .....	15 586	1 480	1 085	57 611	4 958
Housing and community amenities:					
Housing .....	633	—	1	3 411	108
Community and regional development .....	3 009	26	43	3 086	—
Protection of the environment .....	18 548	86	28 388	—9 190	—
Community amenities n.e.c. ....	217	—	20	197	—
Recreation and related cultural services .....	13 098	2 613	2 025	23 621	130
Economic services:					
General administration, regulation and research	14 123	17	3 166	11 239	1 274
Agriculture, forestry and fishing .....	24 320	74	4 032	23 969	7 594
Mining, manufacturing and construction .....	6 949	51	504	10 902	4 457
Electricity, gas and water .....	39 853	—	54 618	—13 258	—
Transport and communication:					
Rail .....	413	—	—	18 957	(d) 3 956
Road .....	573	—	—	38 799	—
Sea .....	12 190	—	14 363	—1 443	—
Urban transit systems .....	—	—	—	18 413	—
Other transport and communication .....	142	9	—	412	—
Other economic services .....	5 317	299	637	8 691	4 410
Other purposes .....	1	15	—	(e) 194 709	(f) 929 910
Total .....	652 424	15 827	143 343	1 048 720	1 023 853

(a) Charges for goods and services supplied have been excluded from receipts and deducted in calculating outlay.

(b) Incorporates receipts and operating expenses of public trading enterprises (business undertakings).

(c) Net cost to the State only. Excludes grants from Commonwealth Government.

(d) Recoup from Australian National Railways for country railways.

(e) Includes interest of \$137 826 000.

(f) Includes general purpose inter-authority transfers from the Commonwealth of \$509 169 000. Also includes taxation.

Space limits the information which can be given for separate receipts and outlay items. Other significant outlay items and their values for 1977-78 are: interest (\$137 826 000), repayments of Commonwealth advances (\$21 120 000), intra-sector transfers (\$24 952 000) and inter-fund transfers (\$249 268 000, including \$120 557 000 transferred to Health Commission and Hospitals Department Deposit Account). Major receipt items and their values for 1977-78 are: general purpose inter-authority transfers (\$509 169 000), interest (\$56 381 000), taxation (\$323 524 000) and inter-fund transfers (\$79 291 000). Details for 1975-76 include the effects of the introduction of Medibank and the non-payment of a State Treasury grant to cover the deficit of railway operations.

Consolidated Revenue Account: Outlay, South Australia<sup>(a)</sup>

Purpose	1974-75	1975-76	1976-77	1977-78
\$'000				
General public services:				
General administration n.e.c. ....	25 997	34 573	39 806	45 710
Law, order and public safety ....	44 426	55 519	68 904	81 313
Other general public services ....	14	19	23	19
Education .....	212 799	272 453	329 547	365 582
Health .....	108 423	173 571	234 189	(b) 165 970
Social security and welfare .....	21 326	40 793	35 371	57 611
Housing and community amenities:				
Housing .....	1 705	12 625	12 194	3 411
Community and regional development .....	1 526	1 837	2 511	3 086
Protection of the environment .....	—7 334	—10 432	—10 621	—9 190
Community amenities n.e.c. ....	143	185	183	197
Recreation and related cultural services	9 936	14 774	17 044	23 621
Economic services:				
General administration, regulation and research .....	5 724	7 056	9 688	11 239
Agriculture, forestry and fishing .....	11 839	14 419	21 406	23 969
Mining, manufacturing and construction .....	4 769	6 536	7 818	10 902
Electricity, gas and water .....	—8 767	—11 118	—11 572	—13 258
Transport and communication:				
Rail .....	67 253	9 750	48 379	18 957
Road .....	24 583	28 893	38 836	38 799
Sea .....	—3 490	—2 629	—2 536	—1 443
Urban transit systems .....	6 284	29 323	12 040	18 413
Other transport and communication .....	304	274	338	412
Other economic services .....	4 635	15 010	23 219	8 691
Other purposes .....	129 362	134 034	158 597	194 709
Total .....	661 457	827 465	1 035 364	1 048 720

(a) Charges for goods and services supplied have been excluded from receipts and deducted in calculating outlay.  
Incorporates receipts and operating expenses of public trading enterprises.

(b) Net cost to the State only. Activities of the South Australian Health Commission and the Hospitals Department are controlled through a Deposit Account at Treasury.

## Taxation

Until the introduction of the uniform income tax scheme in 1942-43, income tax was the major source of taxation receipts in South Australia. Receipts from this form of taxation for the years 1939-40 to 1941-42 were \$4 718 000, \$4 952 000 and \$5 638 000 respectively or 51.70 per cent, 57.02 per cent, and 59.45 per cent of total receipts from taxation. The major forms of taxation now left to the State are payroll tax, motor tax, succession and stamp duties, and land tax.

Gift duty is payable under the provisions of the Gift Duty Act, 1968-1976. Stamp duty is payable on a wide range of instalment purchase, leasing and other lending transactions.

In addition to the fields of taxation open to the State Government, there are fields of taxation in which the Commonwealth Government has sole taxing authority, e.g. customs and excise duties and sales tax. Before 1942 the Commonwealth levied income tax in addition to that imposed by the States but since the commencement of uniform taxation the Commonwealth has been the sole levier of income tax. Commencing in

1977-78, under the new personal income tax-sharing arrangements, each State will have the right to impose a surcharge or grant a rebate on personal income tax in its State. Any State surcharges or rebates will be collected or paid by the Commonwealth on behalf of the States. Total taxation collected by the Commonwealth in South Australia far exceeds State taxation.

The following table shows receipts of taxation into Consolidated Revenue Account over the last five years: receipts of taxation into other accounts are shown on page 540.

**Consolidated Revenue Account: Receipts from Taxation, South Australia<sup>(a)</sup>**

Tax	1974-75	1975-76	1976-77	1977-78	1978-79
\$'000					
Land tax .....	12 673	19 547	18 348	19 614	22 001
Succession duty .....	15 635	19 077	18 905	17 166	16 096
Gift duty .....	1 197	1 445	1 649	1 520	1 322
Racing tax .....	2 130	2 735	3 051	3 225	3 134
Motor tax .....	29 518	32 206	45 835	46 590	49 589
Stamp duties (b) .....	45 499	64 459	78 391	76 224	83 047
Payroll tax .....	86 759	100 506	114 989	120 730	123 121
ETSA levy .....	4 863	5 810	6 956	8 001	9 144
Business franchises .....	8 923	11 636	8 777	9 097	12 035
Licences:					
Liquor .....	5 351	7 424	8 630	10 941	11 197
Other .....	2 231	2 534	2 894	2 884	3 011
Court fees and fines .....	4 135	4 940	5 481	7 148	8 226
Other .....	275	440	375	362	421
Total .....	219 190	272 760	314 280	323 502	342 344

**Proportion of Total Taxation**

			Per cent		
Land tax .....	5.78	7.17	5.84	6.06	6.43
Succession duty .....	7.13	6.99	6.02	5.31	4.70
Gift duty .....	0.55	0.53	0.52	0.47	0.39
Racing tax .....	0.97	1.00	0.97	1.00	0.92
Motor tax .....	13.47	11.81	14.59	14.40	14.49
Stamp duties (b) .....	20.76	23.63	24.94	23.56	24.26
Payroll tax .....	39.58	36.85	36.59	37.33	35.96
ETSA levy .....	2.22	2.13	2.21	2.47	2.67
Business franchises .....	4.07	4.27	2.79	2.81	3.52
Licences:					
Liquor .....	2.44	2.72	2.75	3.38	3.27
Other .....	1.02	0.93	0.92	0.89	0.88
Court fees and fines .....	1.89	1.81	1.74	2.21	2.40
Other .....	0.12	0.16	0.12	0.11	0.12
Total .....	100.00	100.00	100.00	100.00	100.00

(a) Some items and amounts differ slightly from State Treasury classifications.

(b) Excludes stamp duty on third party insurance.

**Business Undertakings, Receipts**

Business undertakings (also titled 'public trading enterprises') supply such services as

sewerage, water supply, harbour facilities, etc. The State Supply Division operated, until 9 March 1977, the Port Lincoln abattoirs treating lambs, pigs and cattle for export or local consumption. On 9 March 1977 the Port Lincoln abattoirs were transferred to the South Australian Meat Corporation (SAMCOR). Receipts from business undertakings for the financial year 1978-79 were \$119 278 000. Total receipts from business undertakings during each of the last four years and their contribution to total Consolidated Revenue are shown on page 529. A dissection of receipts from business undertakings is given in the following table.

#### Receipts from Business Undertakings, South Australia<sup>(a)</sup>

Undertaking	1974-75	1975-76	1976-77	1977-78	1978-79
\$'000					
Railways (b) .....	90 130	48 567	—	—	—
Marine and harbors .....	10 889	10 705	12 751	13 955	17 448
Waterworks .....	29 515	39 250	44 156	53 063	61 534
Sewers .....	17 542	22 408	25 884	27 701	33 136
State Supply .....	1 438	1 530	1 480	—	—
Woods and forests (c) .....	2 500	2 616	2 500	4 000	2 800
Savings Bank of SA (c) .....	525	360	1 159	2 732	2 672
State Bank of SA (c) .....	1 012	1 462	1 096	1 661	1 745
Total .....	153 551	126 897	89 026	103 112	119 335

(a) Receipts into Consolidated Revenue but excluding recoveries of interest and sinking fund.

(b) Before 1975-76, included grant from State Treasury. From 1976-77 the net result of the STA is incorporated in Consolidated Revenue expenditure by way of a contribution towards deficit.

(c) Contribution to Consolidated Revenue from surplus earned.

#### Business Undertakings, Payments

Details of the payments of business undertakings for the years 1974-75 to 1978-79 are given in the next table. Payments in respect of interest and sinking fund have not been taken into account in deriving these figures.

#### Business Undertakings: Payments, South Australia<sup>(a)</sup>

Undertaking	1974-75	1975-76	1976-77	1977-78	1978-79
\$'000					
Railways (b) .....	77 487	88 376	—	—	—
Marine and harbors .....	7 600	8 214	10 278	12 190	12 894
Waterworks .....	20 662	24 920	32 464	39 803	37 338
Sewers .....	9 192	10 675	12 869	15 726	17 107
State Supply .....	1 776	2 101	2 029	—	—
Total .....	116 717	134 286	57 640	67 719	67 339

(a) Excludes interest and sinking fund.

(b) From 1976-77 the net result of the STA is incorporated in Consolidated Revenue expenditure by way of a contribution towards deficit.

#### TRUST FUNDS ACCOUNTS

These are principally moneys lodged with the Treasurer by public authorities and other bodies on current account; funds held for specific purposes pursuant to legislation, not necessarily expendable in any one year; contractors' and statutory deposits and unclaimed moneys. Section 35 of the Public Finance Act also authorises the State

Treasurer to credit specific purpose Commonwealth grants to a suitable trust fund. At 30 June 1979 trust fund accounts showed a credit balance of \$70 707 000, representing approximately 2.8 per cent of the indebtedness of the South Australian Government.

#### LOAN ACCOUNT

This account records the capitalised payments for construction or acquisition of assets such as schools, reservoirs, hospitals, forests, plant and stores; advances to public authorities; and for primary production and housing. During recent years some capital grants (e.g. for housing) have also been made from loan funds.

State borrowing programs are subject to consideration and agreement at meetings of the Australian Loan Council. Funds are raised by the sale of Commonwealth securities on behalf of the State pursuant to the Financial Agreement which also provides for the redemption of such securities over specified periods from sinking funds contributed by the State and Commonwealth Governments to the National Debt Commission. Gross payments for these accounts for the years 1974-75 to 1978-79 are shown in the next table.

**Loan Account: Gross Payments, South Australia**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
\$'000					
Advances to public authorities:					
Electricity Trust (a) .....	6 000	5 000	6 000	—	3 500
Monarto Development Commission .....	1 000	1 200	—	—	100
Pipelines Authority .....	5 000	—	—	—	—
SA Development Corporation .....	400	—	500	600	2 000
SA Land Commission .....	—	—	1 900	—	—
SA Teacher Housing Authority .....	—	—	1 218	900	925
State Bank of SA .....	2 000	13 500	2 800	5 000	255
State Transport Authority .....	14 383	16 292	11 508	8 540	7 000
Other .....	824	790	784	709	551
Advances to primary pro- ducers .....	3 034	2 911	2 489	2 186	3 424
Afforestation .....	4 700	5 797	6 643	7 990	6 620
Community development .....	500	946	1 050	1 199	1 337
Community health .....	—	2 011	919	1 099	709
Government buildings:					
Hospitals .....	25 425	31 875	29 720	24 479	15 199
Schools .....	46 861	48 050	40 481	43 800	39 667
Other .....	22 246	30 076	37 677	42 435	44 382
Harbours and jetties .....	7 220	8 617	8 705	8 126	5 954
Housing .....	809	13 016	9 015	4 005	10 500
Land improvement .....	4 634	6 170	5 409	5 319	989
Non-government hospitals .....	6 197	11 998	12 337	9 444	9 800
Parks and reserves .....	913	2 128	1 250	1 280	1 420
River Murray improvements .....	2 575	2 923	6 751	7 814	2 673
School buses .....	801	1 144	1 579	1 771	1 903
Waterworks & sewers .....	48 470	62 175	64 336	67 559	64 920
Other .....	7 209	4 973	8 054	8 931	13 993
Total .....	211 201	271 592	261 125	253 186	237 821

(a) From 1975-76 includes Leigh Creek Coal Fund.

The following table shows payments from loan fund accounts for the year ended 30 June 1979 together with credits and net balances.

**Loan Account**  
**Gross Payments, Credits, and Net Balances, South Australia, 1978-79**

Particulars	Payments	Credits			Net Aggregate Balance at 30 June 1979
		Repay-ments	Other (a)	Total	
\$'000					
Advances to public authorities:					
Electricity Trust (b) .....	3 500	499	2 879	3 378	170 073
Monarto Development					
Commission .....	100	—	—	—	2 773
Pipelines Authority .....	—	—	—	—	10 500
SA Development					
Corporation .....	2 000	—	—	—	2 600
SA Land Commission ..	—	—	—	—	3 484
SA Teacher Housing					
Authority .....	925	—	—	—	3 043
State Bank of SA .....	255	—	161	161	34 271
State Transport					
Authority .....	7 000	123	445	568	60 648
Other .....	551	53	388	442	7 522
Advances to primary					
producers .....	3 424	2 194	—	2 194	14 702
Afforestation .....	6 620	6 957	—	6 957	27 251
Community development	1 337	190	1 147	1 337	—
Community health .....	709	208	—	208	1 897
Government buildings:					
Hospitals .....	15 199	172	15 512	15 684	62 575
Schools .....	39 667	13 305	30 257	43 563	121 360
Other .....	44 382	10 062	2 904	12 966	219 221
Harbours and jetties .....	5 954	853	2 140	2 993	96 278
Housing .....	10 500	211	1 998	2 210	132 894
Land improvement .....	989	477	999	1 476	26 611
Non-government hospitals	9 800	—	9 800	9 800	—
Parks and reserves .....	1 420	—	1 420	1 420	—
River Murray					
improvements .....	2 673	—	2 673	2 673	6 317
School buses .....	1 903	—	1 117	1 117	5 707
Waterworks & sewers .....	64 920	14 387	8 247	22 634	656 149
Other .....	13 993	1 727	5 513	7 240	34 289
<b>Total .....</b>	<b>237 821</b>	<b>51 418</b>	<b>87 600</b>	<b>139 019</b>	<b>1 700 165</b>

(a) Includes securities redeemed and cancelled by the National Debt Commission on account of South Australia (\$25 316 000) and capital works grants from the Commonwealth (\$62 284 000).

(b) Includes Leigh Creek Coal Fund.

**SPECIAL COMMONWEALTH ADVANCES**

Pursuant to agreements with the States, the Commonwealth has made sums available to the State for various purposes. These advances are not subject to sinking fund

conditions but are repayable by annual instalments in terms of the respective agreements. Details of Commonwealth advances, repayments and interest on these advances for the years 1974-75 to 1978-79 are shown in the following table.

#### Commonwealth Advances to South Australia, Repayments and Interest on these Advances

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
\$'000					
<b>Advances:</b>					
Housing .....	56 360	56 360	56 360	58 460	47 368
Housing for servicemen .....	130	1 725	2 107	1 317	—
Growth centres .....	4 978	1 399	980	1 088	1 201
Land acquisition .....	17 518	19 392	10 352	11 507	6 712
Sewerage .....	4 025	3 990	702		
Natural disaster relief .....	—	—	—	12 117	4 929
Rural reconstruction .....	1 500	3 825	2 086	300	—
Urban water supply .....	4 400	6 252	6 423	4 200	3 105
Rural adjustment .....				5 956	4 163
Other .....	3 683	5 773	2 220	-87	—
Total advances .....	92 594	98 716	81 229	94 858	67 477
<b>Repayment of advances:</b>					
Housing .....	2 398	2 797	3 213	3 645	4 108
Natural gas .....	1 875	1 875	1 875	1 875	1 875
Railway projects .....	1 022	—	2	2	2
Other .....	82	311	545	689	738
Total repayments .....	5 377	4 983	5 635	6 211	6 723
<b>Interest on advances:</b>					
Housing .....	13 391	15 899	18 115	20 397	22 602
Growth centres .....	447	841	980	1 088	1 201
Land acquisition .....	975	2 987	4 570	5 507	6 712
Rural reconstruction .....	565	714	875	1 013	999
Sewerage .....	75	647	955	985	983
Urban water supply .....	—	418	1 107	1 724	2 049
Other .....	1 723	909	1 462	1 767	2 205
Total interest .....	17 176	22 415	28 064	32 481	36 751

#### LOAN RAISINGS AND THE PUBLIC DEBT

##### State Debts Taken Over by the Commonwealth

Under the Financial Agreement the Commonwealth took over on 1 July 1929 State responsibilities to bond-holders in respect of State debts existing on 30 June 1927; and all debts of each State existing on 1 July 1929 for money borrowed by that State are deemed to be money borrowed by the Commonwealth for and on behalf of the State. The Commonwealth agreed to contribute one-third of sinking funds required to repay those debts over a period of fifty-eight years.

Also for a period of fifty-eight years from 1 July 1927 the Commonwealth agreed to contribute the sum of \$15 169 824 (\$1 407 632 for South Australia) each year towards the

interest payable on the State debts. The balance of the interest payable on State debts was to be paid into the National Debt Sinking Fund by the States.

The *Financial Agreement Act 1976* provided for the transfer of \$1 000 million of State debt to the Commonwealth from 30 June 1975. The Act also provided for new sinking fund arrangements in respect of State debt.

As a result of the transfer of the South Australian non-metropolitan railway system, \$124 000 000 of State debt was taken over by the Commonwealth.

#### Australian Loan Council

One of the main features of the Financial Agreement was the establishment of the Australian Loan Council which was set up to co-ordinate the borrowings of the Commonwealth and State Governments. It consists of the Prime Minister of Australia, or another Minister nominated by him, as chairman, and the State Premiers, or Ministers nominated by them.

Each year, the Loan Council examines the loan programs of the Commonwealth and State Governments and determines the total amount to be borrowed during the year. Borrowings by the Commonwealth for defence purposes are not subject to decisions of the Loan Council.

Subject to the decisions of the Loan Council the Commonwealth arranges for all borrowings for or on behalf of itself or any State, and for all conversions, renewals, redemptions, and consolidations of the securities issued on behalf of the Commonwealth and State Governments. If the Loan Council unanimously decides, however, a State may borrow outside Australia in its own name, and may issue securities for the amount so borrowed. The Commonwealth then guarantees that the State will fulfil its obligations to bond-holders in respect of the money so borrowed, and the money is deemed to be borrowed by the Commonwealth for and on behalf of the State.

Subject to any maximum limits decided upon by the Loan Council for interest, brokerage, discount, and other charges, the Commonwealth or any State Government may borrow within its own territory, for any purpose, money from any authorities, bodies, funds, or institutions (including savings banks) constituted or established under Commonwealth or State law or practice; borrow from the public by means of counter sales of securities; and use any available public moneys. However, any securities issued for moneys so borrowed or used must be Commonwealth Government securities on terms approved by the Loan Council.

Since 1936 the Australian Loan Council has, by the consent of its members, exercised substantial control over the limits of borrowing by local government and public corporations. The Loan Council determines maximum interest rates and other terms and conditions of loans raised by authorities and also approves annual overall programs for 'larger' authorities (for 1978-79 those borrowing more than \$1 million in the year).

Loan Council approval may be given to overseas borrowing under the normal semi-government borrowing program where it can be demonstrated that the program cannot be raised in Australia on satisfactory terms because of domestic market conditions.

#### National Debt Commission

The National Debt Commission and the National Debt Sinking Fund, which it administers, were created under the *National Debt Sinking Fund Act 1923*. All previously existing sinking funds relating to Commonwealth debt were merged in the National Debt Sinking Fund at the time of its establishment; and under the provisions of the Financial Agreement of 1927 all relevant interest and principal contributions by both the Commonwealth and State Governments, in respect of State debts, are negotiated through the Fund.

These contributions are not accumulated but are applied by the Commission to the redemption of the public debts of the States, and the repurchase of securities issued in respect thereof. Under the provisions of the Financial Agreement, repurchased or redeemed securities must be cancelled, and the debts of the States are reduced accordingly.

Contributions by the Commonwealth on behalf of South Australia, and by the State Government to the National Debt Sinking Fund, and redemptions and repurchases of securities by payment from the Fund for the financial years 1977-78 and 1978-79 are given in the following table. Corresponding figures for all States are also stated.

#### National Debt Sinking Fund

Particulars	1977-78		1978-79	
	South Australia	All States	South Australia	All States
\$'000				
Receipts:				
Contributions by Commonwealth .....	4 191	33 747	4 483	35 959
Contributions by State .....	16 920	136 703	18 168	146 180
Interest on the temporary investments of State funds during the year .....	88	582	451	3 130
Total receipts .....	21 199	171 032	23 102	185 269
Expenditure:				
Redemptions and repurchases:				
In Australia .....	11 648	99 670	24 500	181 773
In London .....	1 237	16 226	1 866	26 877
In New York .....	1 098	9 690	885	8 108
In Canada .....	86	639	96	711
In Netherlands .....	104	810	118	922
Total expenditure .....	14 173	127 035	27 465	218 391

#### The Public Debt

The following table gives details of the public debt and total indebtedness of South Australia at 30 June 1979 and for the four previous years.

#### Public Debt and Total Indebtedness, South Australia

At 30 June	Public Debt—Being Interest Bearing Securities Outstanding		Other Interest Bearing Indebted- ness (a)	Non- interest Bearing Indebted- ness (a)	Total Indebtedness	
	Total	Per Head			Total	Per Head
	\$'000	\$			\$'000	\$
1975 .....	1 425 333	1 138.35	451 080	24 447	1 900 860	1 518.14
1976 .....	1 394 702	1 105.50	523 152	38 307	1 956 161	1 550.54
1977 .....	1 495 737	1 171.47	601 152	24 350	2 121 240	1 661.37
1978 .....	1 605 834	1 247.15	675 065	21 941	2 302 840	1 788.47
1979 .....	1 702 221	1 318.84	737 758	49 671	2 489 650	1 928.91

(a) Gross less securities held on these accounts.

### The Loan Fund

A summary of loan raisings to finance State Government loan works in South Australia during 1978-79 is given in the following statement.

#### The Loan Fund, South Australia, 1978-79

\$'000

(1) *Cash operations:*

Balance at 30 June 1978 .....	—
<b>Receipts:</b>	
New loan raising .....	124 741
Repayments .....	51 418
Capital works grant .....	62 284
	<hr/>
	238 443
<b>Payments:</b>	
Works and services .....	232 159
Transfer to Consolidated Revenue .....	5 662
	<hr/>
	237 821
Balance at 30 June 1979 .....	<hr/> 622

(2) *Movement in public debt:*

The public debt at 30 June 1978 .....	1 605 834
<i>Add:</i> Face value of new loans raised;	
For cash .....	124 741
For conversion .....	154 762
	<hr/>
	1 885 337

*Less:* Face value of securities redeemed and cancelled by

National Debt Commission .....	28 354
Loans converted .....	154 762
	<hr/>
	183 116
The public debt at 30 June 1979 .....	<hr/> 1 702 221

### DEPOSIT AND SUSPENSE ACCOUNTS

Reference to these accounts was made in Part 11.1. Although the main function of many of them is to facilitate the allocation of charges and recoups to various headings of receipts and payments within the Budget sector, some contain, as already noted, substantial transactions which are not reflected in the Budget. Deposit and Suspense Accounts showed a credit balance of \$69 406 000 at 30 June 1979.

### STATE TAXATION

In addition to those items received into Consolidated Revenue Account the State Government receives certain items of taxation into other accounts. These, together with similar receipts by public corporations, constitute 'total taxation to other accounts' as recorded in the following table.

State Taxation, South Australia<sup>(a)</sup>

Tax	1974-75	1975-76	1976-77	1977-78	1978-79
To Consolidated Revenue	219 190	272 760	314 280	323 502	342 344
<b>To other accounts:</b>					
Road maintenance charges .....	4 050	4 243	4 716	4 825	4 812
Lottery tax .....	3 648	4 978	5 661	7 861	14 384
Racing taxes .....	6 169	7 122	8 160	8 315	8 035
Stamp duty .....	1 643	2 072	2 101	2 162	2 289
Fire insurance contributions(b) .....	4 715	6 212	9 043	8 270	9 644
Reserves contributions(c) .....	1 109	1 165	1 169	967	607
Other .....	679	1 175	1 566	1 451	3 131
Total to other accounts	22 012	26 968	32 416	33 851	42 901
Total taxation .....	241 202	299 728	346 696	357 353	385 245
Per head of population .....	193.72	238.54	Dollars 273.25	278.46	298.50

(a) Some items and amounts differ slightly from State Treasury classifications.

(b) Levy on insurance companies.

(c) Paid to State Planning Authority under Planning and Development Act and Real Property Act.

## Further References

Additional information may be found in the following publications:

## South Australian Office

5501.4 *Public Finance*

## Central Office

5504.0 *Public Authority Finance: State and Local Authorities*

## 11.4 PUBLIC CORPORATION FINANCE

For the purpose of determining the scope of public corporation finance statistics, a public corporation is defined as a body (other than a local government authority) created by or under legislation to carry out an activity or activities on behalf of a government, or a body in which a government has a controlling interest.

Many public corporations produce annual reports reviewing their activities and most of them publish financial statements. In South Australia there is no consolidated tabulation of statistics covering revenue and expenditure of public corporations.

Activities carried out by public corporations include tertiary education, hospital services, power supply, public transport, banking services, fire control, irrigation and drainage in rural areas, control and regulation of milk supply, slaughtering of animals for human consumption, housing development, off-course totalisators and lotteries, and investigation of problems relating to the development of mineral resources.

### Business Undertakings

Some public corporations are classified as business undertakings because they seek to cover a substantial part of their cost by selling goods and services to the public. The following tables show revenue and expenditure of some of those business undertakings. Capital indebtedness refers to the amount outstanding at the end of the relevant period on indebtedness incurred initially for a period exceeding twelve months.

#### Electricity Trust of South Australia<sup>(a)</sup>

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
			\$'000		
Income .....	108 492	130 401	153 950	179 682	204 135
Operating expenses .....	91 149	108 017	128 635	144 936	169 858
Surplus on operating .....	17 343	22 384	25 315	34 746	34 277
Debenture interest .....	19 758	22 136	24 791	28 213	32 398
Extraordinary items .....	—	—	—	2 010	1 000
Net surplus .....	—2 415	248	524	4 523	879
Capital indebtedness .....	332 439	353 759	371 932	401 317	442 778

(a) From 1975-76 includes Leigh Creek Coal Fund which was dissolved on 1 July 1975.

#### Savings Bank of South Australia

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
			\$'000		
Income .....	53 890	68 096	78 040	87 396	96 028
Management expenses, etc.	17 523	22 859	25 301	30 447	34 494
Interest on customers' deposits .....	35 445	42 716	47 074	51 403	56 108
Net profit .....	922	2 520	5 665	5 546	5 426
Depositors' balances (a) ....	697 459	776 473	842 842	919 756	1 023 805

(a) At end of period. Figures include deposit stock.

#### Pipelines Authority of South Australia

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
			\$'000		
Income .....	17 451	24 493	34 102	43 407	47 864
Operating expenditure .....	15 101	19 321	28 911	36 717	40 568
Surplus on operating .....	2 351	5 172	5 191	6 690	7 296
Interest on loan capital .....	3 094	4 105	4 706	5 644	6 525
Net surplus .....	—743	1 067	486	1 046	771
Capital indebtedness .....	54 359	59 190	63 892	64 379	64 591

**South Australian Housing Trust**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
Income .....	28 617	36 897	44 836	53 908	60 311
Expenditure .....	16 625	19 921	26 565	34 620	39 831
Surplus on operating .....	11 992	16 976	18 271	19 288	20 480
Interest on loan capital .....	12 514	14 487	15 863	20 056	23 732
Extraordinary items .....	—	—	—	84	188
Net surplus .....	—522	2 489	2 408	—852	—3 440
Capital indebtedness .....	353 860	407 977	452 299	495 267	528 291

**State Bank of South Australia**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
Income .....	20 055	23 166	30 200	35 369	42 826
Management expenses, etc.	3 946	5 083	5 632	6 390	8 418
Interest on customers' deposits .....	3 809	4 788	7 955	9 926	13 040
Interest on advances from the Treasurer of SA .....	9 376	11 104	13 291	15 564	18 214
Net profit .....	2 924	2 191	3 323	3 489	3 154
Capital indebtedness .....	197 236	238 066	267 588	301 222	360 080

**South Australian Meat Corporation<sup>(a)</sup>**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79 (b)
Income .....	13 757	19 495	24 521	35 905	20 300
Operating expenses .....	12 793	18 301	25 248	39 185	21 736
Surplus on operating .....	964	1 194	—727	—3 280	—1 436
Interest .....	705	619	1 716	2 080	2 714
Net deficit .....	—259	—575	—2 443	—5 360	—4 150
Capital indebtedness .....	12 469	16 323	18 608	21 301	23 100

(a) From 9 March 1977 includes the operations of Port Lincoln Division.

(b) During 1978-79 the Corporation ceased purchasing and billing livestock on its own account.

State Transport Authority<sup>(a)</sup>

Particulars	1978-79
Income .....	\$'000 24 550
Operating expenses .....	66 264
Deficit on operating .....	41 714
Interest charges .....	4 779
Deficit .....	46 493
Grant from State Government .....	44 200
Net Deficit .....	2 293
Capital indebtedness .....	62 613

(a) Includes the Bus and Tram, Metropolitan Rail, Head Office and Regulation Branch operations. Comparable figures for 1977-78 are not available as the Authority was not able to differentiate between the metropolitan and non-metropolitan rail operations.

## GRANTS FROM STATE GOVERNMENT

The following table shows grants to a number of public corporations during each of the five years ended 30 June 1978.

## Public Corporations: Grants From State Government, South Australia

Public Corporation	1973-74	1974-75	1975-76	1976-77	1977-78
Adelaide Festival Centre Trust .....	812	1 126	2 608	2 624	3 627
Coast Protection Board (a) .....	676	281	245	272	368
Fire Brigades Board .....	590	872	1 194	1 760	1 619
Institute of Medical and Veterinary Science .....	3 342	5 392	1 010	1 120	2 306
Kindergarten Union .....	—	—	7 221	9 135	9 385
State Transport Authority:					
Bus and Tram Division .....	2 250	5 900	8 800	12 040	18 413
Rail Division (b) .....	—	—	—	48 377	18 542
SA Film Corporation .....	505	720	1 238	1 377	1 887
SA Institute of Technology .....	6 679	579	561	718	766
SA Theatre Company .....	293	466	498	660	850
State Planning Authority .....	300	300	300	300	—
Subsidised hospitals .....	2 385	4 197	9 364	8 644	10 746
Other (c) .....	830	11 602	19 697	4 649	8 842
Total .....	18 662	31 435	52 736	91 676	77 351

(a) Includes advances from State Loan Fund that are cleared of liability by allocations from Commonwealth capital works grants.

(b) Before July 1976 all transactions of the Railways were part of Consolidated Revenue Account.

(c) Includes Unemployment Relief Grants paid to various public corporations (\$2 162 000 in 1977-78). Also includes non-repayable advances made to the Housing Trust (\$10 000 000 in 1975-76) and the Pipelines Authority (\$17 000 000 in 1976-77).

Grants from Consolidated Revenue Account and from Loan Fund have been consolidated and the figures represent actual amounts paid to authorities, free of all duplication. Payments for goods and services supplied by public corporation business undertakings

are not included in the table. Repayable advances from Loan Fund are also excluded. The table excludes grants to universities and hospitals other than subsidised hospitals, as for the purpose of Public Finance statistics these amounts are considered to be final expenditure. Details of grants made to colleges of advanced education before 1 January 1974 are also excluded because from that date the Commonwealth Government assumed full financial responsibility for all tertiary education.

### LOAN RAISINGS AND DEBT OUTSTANDING

Details of public corporation loan raisings and debt outstanding are included in the following tables. New loans raised during the year include new loan liabilities incurred during the year, loans raised to repay indebtedness to the Government, and interest capitalised. Loans raised and redeemed within the year, increases in overdrafts, and loans raised for conversion or redemption of existing debts are excluded.

Debt includes all liabilities for which arrangements have been made for repayment over a period of one year or more, and net overdrafts. Interest capitalised, and amounts due for the capital cost of assets or for services rendered which are to be repaid over a period of one year or more, have also been included. Current liabilities such as interest accrued (but not capitalised), trade creditors, amounts held in trust and other debts which are to be repaid in less than one year are not included. Net overdraft is the gross overdraft of all funds, less all bank credit balances (including fixed deposits), which do not form part of a sinking fund to repay a loan.

The next two tables show, respectively, new money loan raisings and funds provided for redemption of debt for the year ended 30 June 1978 and debt outstanding at 30 June 1977 and 1978.

**Public Corporations: New Money Loan Raisings and Funds Provided for Redemption of Debt, South Australia, 1977-78**

Activity	New Loan Raisings in Australia			Funds for Redemption of Debt (a)		
	From Government Lenders	Other	Total	To Government Lenders	Other	Total
\$'000						
Abattoirs .....		2 700	2 700	42	259	302
Banking .....	40 782	—	40 782	4 917	2 230	7 147
Buses and trams .....	—	1 000	1 000	1 650	3	1 653
Community and regional development .....	6 000	2 800	8 800	3 541	165	3 706
Electricity supply .....	—	35 468	35 468	2 202	3 905	6 106
Gas pipelines .....	—	3 025	3 025	1 875	662	2 537
Housing .....	36 128	15 700	51 828	7 439	1 404	8 844
Other .....	4 705	11 865	16 570	1 344	861	2 204
Total .....	87 615	72 558	160 173	23 010	9 489	32 499

(a) Includes amounts credited to Sinking Funds and excludes amounts redeemed from Sinking Funds.

**Public Corporations: Debt Outstanding, South Australia**

Activity	Debt in Australia at					
	30 June 1977			30 June 1978		
	To Govern- ment Lenders	Other	Total	To Govern- ment Lenders	Other	Total
\$'000						
Abattoirs .....	1 815	16 812	18 628	1 773	19 227	21 001
Banking .....	263 748	3 840	267 588	299 612	1 610	301 222
Buses and trams .....	21 931	—	21 931	20 281	997	21 278
Community and regional development .....	66 577	17 018	83 594	69 036	19 653	88 689
Electricity supply .....	172 152	199 937	372 090	169 981	231 466	401 446
Gas pipelines .....	16 125	47 767	63 892	14 250	50 129	64 379
Housing .....	353 308	102 187	455 495	380 778	114 504	495 283
Other .....	4 808	28 464	33 273	9 389	43 075	52 463
Total debt .....	900 465	416 026	1 316 490	965 100	480 661	1 445 761
Annual Interest Payable (\$'000)						
Total interest .....	46 845	33 147	79 992	50 109	40 694	90 803

**11.5 LOCAL GOVERNMENT FINANCE**

For the purpose of determining the scope of local government finance statistics, a local government authority is defined as:

- (i) an authority set up under a local government Act to carry out the functions of local government in a defined area (known as a municipality or district council area) and the members of which are elected by persons enrolled as electors for the House of Assembly in respect of an address within the area, or who are ratepayers in respect of ratable property within the area. A body corporate is enrolled under the name of a nominated agent;
- (ii) an authority created or acquired by a local government authority (as defined above) or by two or more local government authorities (in South Australia an authority established under Part XIX or Section 666(c) of the Act).

**REVENUE AND EXPENDITURE**

The expenditure of moneys by local government bodies is authorised by the Local Government Act, 1934-1979. Under the Act each council is required to prepare a balance sheet and statement of its accounts on an accrual basis for each financial year and these statements are the basis of the statistics published on local government finance.

### Assessments

Assessments for property rating are based upon annual value or land value. Annual value is based on five per cent of the capital value of the land, or on the estimated gross annual rental at which a ratable property would be let from year to year with an allowance, not exceeding one-quarter, to cover all outgoings; whereas land value is an estimate of the value of the land (regardless of structural improvements) included in a property. A council may adopt the 'annual' valuations or the 'land' valuations of the State Valuer-General or may make its own valuation of properties.

### Rating of Properties

A council may declare general or differential rates on properties in its area. Special rates may be levied for street watering or other purposes.

### Revenue Transactions

The following tables show revenue transactions for local government authorities for 1977-78 prepared on an accrual basis.

**Local Government Authorities  
General Fund, Reserve Fund and Government Grants Fund, Income  
South Australia, 1977-78**

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
\$'000			
Taxation:			
Rates;			
Declared for year .....	61 384	23 395	84 780
Fines on overdue rates .....	438	203	641
Ex gratia payments in lieu of rates .....	149	110	259
Total rates .....	61 971	23 709	85 680
Licences and permits;			
Building .....	1 476	303	1 779
Dog .....	152	81	232
Other .....	170	43	213
Total licences and permits .....	1 798	427	2 225
Total taxation .....	63 769	24 136	87 905
Public works:			
Reimbursements for roadworks;			
State Government (b) .....	1 296	1 037	2 334
Ratepayers (moieties) .....	1 014	418	1 432
Other .....	1 656	1 111	2 768
Sewerage and effluent drainage fees .....	467	866	1 333
Stormwater drains .....	318	1 121	1 439
Total public works .....	4 752	4 554	9 306

**Local Government Authorities**  
**General Fund, Reserve Fund and Government Grants Fund, Income**  
**South Australia, 1977-78 (continued)**

Particulars	Adeelaide Statistical Division (a)	Other Areas	Total
\$'000			
Public services and council properties:			
Care of aged persons .....	1 147	285	1 432
Child care centres .....	—	225	225
Commercial properties n.e.c. ....	294	662	956
Fire protection .....	147	435	582
Foreshore .....	218	204	422
Halls and theatres .....	1 382	315	1 696
Hospitals and health (including cemeteries) .....	204	278	482
Houses .....	471	181	652
Libraries .....	773	215	988
Parks, gardens, recreation, etc. ....	3 367	2 996	6 363
Sanitary and garbage .....	378	219	597
Swimming pools .....	364	123	486
Tourism .....	16	421	437
Traffic and parking .....	4 414	53	4 466
Other .....	3 660	3 490	7 153
Total council properties .....	16 835	10 102	26 937
Government grants for roadworks:			
Grants(c) .....	2 121	3 876	5 997
Reimbursements(d) .....	674	1 497	2 172
Total Government grants for road- works .....	2 796	5 373	8 169
Other income:			
Fines (mainly traffic and parking) .....	1 701	19	1 720
Grants Commission grants .....	7 653	6 567	14 220
Interest .....	3 471	746	4 217
Reimbursements for private works .....	769	1 264	2 033
Sale of council properties .....	65	106	172
Other .....	1 185	210	1 396
Total other income .....	14 844	8 913	23 758
<b>Total income .....</b>	<b>102 996</b>	<b>53 079</b>	<b>156 074</b>

(a) Adjusted to include the whole of Meadows and Willunga District Council areas and to exclude the whole of Mudla Wirra. (b) Mainly reinstatements. (c) Other grants and subsidies are included under respective functional headings above. (d) For work done on behalf of Highways Department.

**Local Government Authorities**  
**General Fund, Reserve Fund and Government Grants Fund, Expenditure**  
**South Australia, 1977-78**

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
		\$'000	
General administration .....	9 850	6 086	15 936
Debt services:			
Interest;			
On loans .....	5 868	1 798	7 666
On overdraft .....	63	63	126
Principal redeemed .....	4 099	2 711	6 810
Total debt services .....	10 030	4 572	14 602
Public works:			
Roads, streets and bridges;			
Construction .....	12 733	10 184	22 917
Maintenance .....	10 287	7 667	17 955
Sewerage and effluent drains;			
Construction .....	27	2 246	2 273
Maintenance .....	137	250	388
Contributions to stormwater drainage schemes(b) .....	2 161	216	2 377
Net plant expenditure .....	—473	731	258
Other .....	73	1	74
Total public works .....	24 946	21 295	46 241
Public services and council properties:			
Current;			
Building Act .....	1 568	371	1 938
Bus services .....	10	522	532
Care of aged persons .....	883	148	1 031
Child care centres .....	—	139	139
Commercial properties n.e.c. ....	115	472	587
Fire protection .....	1 469	666	2 134
Halls and theatres .....	1 770	684	2 453
Hospitals and health (including cemeteries, etc.) .....	3 873	1 733	5 607
Houses .....	319	150	470
Libraries .....	2 130	489	2 619
Markets .....	520	—	520
Parks, gardens, recreation, etc. ....	13 441	5 089	18 530
Sanitary and garbage .....	5 684	1 428	7 111
Street cleaning .....	848	73	922
Street lighting .....	2 118	547	2 665
Swimming pools .....	804	317	1 121
Tourism .....	75	466	542
Town planning .....	1 599	241	1 840
Traffic and parking .....	4 203	95	4 298

**Local Government Authorities  
General Fund, Reserve Fund and Government Grants Fund, Expenditure  
South Australia, 1977-78 (continued)**

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
\$'000			
<b>Public services and council properties:</b>			
(continued)			
Vermin control .....	13	189	202
Weed control .....	179	812	991
Other .....	1 101	2 296	3 397
<b>Capital (c);</b>			
Land and buildings,			
Care of aged persons .....	263	196	459
Child care centres .....	77	106	183
Council properties and depots .....	352	297	649
Halls and theatres .....	1 000	155	1 154
Houses .....	380	133	512
Parks, gardens, recreation, etc. ....	3 066	1 039	4 105
Traffic and parking .....	98	14	112
Other .....	1 857	936	2 794
Plant and machinery,			
Roadmaking .....	3 176	2 474	5 651
Other .....	282	392	675
Other assets .....	808	350	1 158
<b>Total public services and council properties</b> .....	54 082	23 019	77 101
<b>Other expenditure:</b>			
Cost of private works .....	1 068	975	2 043
Donations to charitable organisations, clubs etc. ....	195	506	701
Unallocated indirect expenditure .....	2 671	1 744	4 415
Other .....	1 602	591	2 193
<b>Total other expenditure</b> .....	5 536	3 816	9 352
<b>Total expenditure</b> .....	104 443	58 788	163 231

(a) Adjusted to include the whole of Meadows and Willunga District Council areas and to exclude the whole of Mudla Wirra.

(b) Expenditures in respect of South-Western Suburbs Drainage Scheme are included under debt services above.

(c) These values are understated to the extent that some councils report expenditures net of trade-ins.

### Government Grants

Local government authorities receive general purpose and specific purpose grants from the Commonwealth and State Governments. Some Commonwealth grants are paid direct to local government authorities while the remainder are paid to the State Government for on-passing to the relevant authorities.

The following table shows Commonwealth grants paid direct to local government authorities for the last three years.

**Commonwealth Grants Paid Direct to Local Government Authorities**

Grant	1976-77	1977-78	1978-79
	\$'000		
Aged or disabled persons homes .....	1 712	310	116
Child care and pre-schools .....	904	286	720
Aboriginal advancement .....	27	136	201
Aerodrome local ownership plan .....	43	37	208
Community Youth Support Scheme .....	13	113	171
Nursing homes .....	99	318	381
Community arts activities .....	15	3	8
Total .....	2 813	1 203	1 805

Details of the amounts on-passed by the State Government during the last three years are given in the following table. These grants are included with the grants to State and local government authorities shown on page 524.

**Commonwealth Grants On-passed by the State Government to Local Government Authorities**

Grant	1976-77	1977-78	1978-79
	\$'000		
Senior citizens' centres .....	220	372	445
National Estate .....	24	16	34
Capital assistance for leisure facilities .....	922	86	—
Grants Commission .....	11 925	14 220	15 433
Area improvement .....	30	—	—
Child care and pre-schools .....	—	—	91
Total .....	13 121	14 694	16 003

The State Government also makes various grants to local government authorities. Details of these grants made over the last three years are shown in the following table.

**State Government Grants Paid to Local Government Authorities**

Grant	1976-77	1977-78	1978-79
	\$'000		
Civil defence .....	14	17	42
Libraries .....	534	689	1 254
Roads .....	5 940	6 315	6 632
Urban stormwater drainage .....	1 692	1 025	1 742
Urban effluent drainage .....	1 450	1 724	916
Public parks and parklands maintenance .....	659	650	449
Fire protection .....	259	272	97
Unemployment relief .....	7 271	9 903	3 636
Tourism .....	355	496	500
Sporting and recreation facilities .....	387	490	1 032
Senior citizens' centres .....	95	22	72
Rundle Street Mall .....	101	18	9
Festival Theatre .....	—	89	23

State Government Grants Paid to Local Government Authorities (*continued*)

Grant	1976-77	1977-78	1978-79
	\$'000		
Debt Servicing (Festival Theatre) .....	148	148	148
Provision for the arts .....	2	14	13
Residential rate rebate .....	60	—	—
Rehabilitation of land .....	240	—	—
Bicycle tracks .....	—	96	82
Vertebrate pest control .....	—	65	62
Community bus services .....	—	—	91
Clearing of sand drifts .....	—	—	209
Total .....	19 207	22 033	17 009

## LOAN FUND INCOME AND EXPENDITURE

The following table shows the major items of loan fund income and expenditure for 1977-78 prepared on an accrual basis.

**Local Government Authorities: Loan Fund Income and Expenditure  
South Australia, 1977-78**

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
\$'000			
Income:			
Loans raised .....	13 813	5 879	19 692
Other .....	965	280	1 245
Total income .....	14 778	6 159	20 937
 Expenditure:			
Public works:			
Roads, streets and bridges,			
Construction .....	5 293	1 493	6 786
Maintenance .....	286	—	286
Stormwater drains .....	1 833	104	1 937
Sewerage and effluent drains .....	15	567	582
Total public works .....	7 427	2 164	9 591
Construction or purchase of assets;			
Land and buildings,			
Development projects .....	1 164	10	1 174
Halls and theatres .....	112	136	248
Houses .....	—	88	88
Libraries .....	15	18	33
Offices and depots .....	4 674	11	4 686
Parks, gardens, recreation, etc.	787	648	1 435
Traffic and parking .....	703	—	703
Other .....	2 096	702	2 797

**Local Government Authorities: Loan Fund Income and Expenditure  
South Australia, 1977-78 (continued)**

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
\$'000			
<b>Expenditure: (continued)</b>			
Plant and machinery,			
Roadmaking .....	226	2 097	2 323
Other .....	73	38	111
Other assets .....	—	362	362
<b>Total construction or purchase of assets .....</b>	<b>9 850</b>	<b>4 109</b>	<b>13 959</b>
<b>Total expenditure .....</b>	<b>17 277</b>	<b>6 274</b>	<b>23 551</b>

(a) Adjusted to include the whole of Meadows and Willunga District Council areas and to exclude the whole of Mudla Wirra.

The principal source of income was from new money loan raisings (\$19 692 000), while the major expenditure items were the construction of roads, streets and bridges (\$6 786 000) and council offices and depots (\$4 686 000).

#### LOAN RAISINGS AND DEBT OUTSTANDING

Local government authorities loan raisings and debts outstanding are shown in the following tables. The definitions of 'new loans raised' and 'debt', given on page 544 under 'Loan Raisings and Debt Outstanding', also apply to the statistics in this section.

The table below shows new money loan raisings and funds provided for redemption of debt for the years 1968-69 to 1977-78.

**Local Government Authorities: New Money Loan Raisings and Funds Provided for Redemption of Debt, South Australia**

Year	New Loan Raisings in Australia			Funds for Redemption of Debt (a)		
	From Govt	Other	Total	To Govt	Other	Total
\$'000						
1968-69 .....	470	7 455	7 925	905	2 068	2 973
1969-70 .....	504	9 430	9 934	822	2 481	3 303
1970-71 .....	939	10 338	11 277	671	2 851	3 522
1971-72 .....	328	10 111	10 439	537	3 409	3 946
1972-73 .....	290	9 546	9 836	520	3 809	4 329
1973-74 .....	30	10 815	10 845	367	3 971	4 338
1974-75 .....	40	13 979	14 019	335	4 476	4 811
1975-76 .....	140	16 807	16 947	265	5 191	5 456
1976-77 .....	149	20 843	20 992	206	5 873	6 079
1977-78 .....	123	19 569	19 692	176	6 758	6 934

(a) Includes amounts credited to Sinking Funds and excludes amounts redeemed from Sinking Funds: both these figures are small in South Australia.

The following table for local government authorities shows total debt outstanding and annual interest payable on this debt for the years 1968-69 to 1977-78.

**Local Government Authorities: Debt Outstanding and  
Annual Interest Payable, South Australia**

Year	Debt in Australia			Annual Interest Payable		
	To Govt	Other	Total	To Govt	Other	Total
\$'000						
1968-69 .....	6 956	47 479	54 435	316	2 645	2 961
1969-70 .....	6 637	54 389	61 025	290	3 106	3 396
1970-71 .....	6 914	62 198	69 112	304	3 719	4 023
1971-72 .....	6 798	69 007	75 806	300	4 240	4 539
1972-73 .....	6 581	74 951	81 535	289	4 627	4 915
1973-74 .....	4 639	82 119	86 758	203	5 261	5 465
1974-75 .....	2 652	91 953	94 605	111	6 395	6 506
1975-76 .....	2 520	104 111	106 631	121	7 848	7 969
1976-77 .....	2 466	119 526	121 993	133	9 711	9 845
1977-78 .....	2 462	131 936	134 398	133	11 153	11 286

**BUSINESS UNDERTAKINGS**

Some local government authorities operate electricity undertakings and quarries. Expenditure by authorities for goods and services supplied by their business undertakings are included both in expenditures from general, etc. funds and in income of the business undertakings. Loan raisings and subsequent expenditures are included under Loan Fund income and expenditure.

**Local Government Authorities: Business Undertakings, Income and Expenditure  
South Australia, 1977-78**

Current account transactions (a):		\$'000
Electricity undertakings;		
Current income,		
Electricity sales .....	2 168	
Other .....	1 059	
Total current income .....	3 227	
Current expenditure,		
Generation and distribution .....	1 812	
Purchase of electricity .....	637	
Debt services,		
Interest .....	402	
Principal redeemed .....	218	
Administration and other .....	591	
Total current expenditure .....	3 659	
Deficit .....	432	

**Local Government Authorities: Business Undertakings, Income and Expenditure  
South Australia, 1977-78 (continued)**

	\$'000
Quarries;	
Current income .....	105
Current expenditure .....	373
Deficit .....	<u>268</u>
Deficit (all undertakings) .....	<u>700</u>

(a) Transactions relating to construction or purchase of capital assets are not taken into account in arriving at surplus or deficit.

## 11.6 AUSTRALIAN NATIONAL ACCOUNTS

National accounting aims at providing a systematic summary of the transactions taking place in the economy, especially of those that relate to the production and use of goods and services, and to transfers of income or capital between sectors of the economy.

### Concepts

The fundamental concepts of domestic product and national income and expenditure are described below.

*Gross Domestic Product at Market Prices* (usually referred to as Gross Domestic Product) is defined as the total market value of goods and services produced in Australia after deducting the cost of goods and services used up in the process of production but before deducting allowances for the consumption of fixed capital. It is the sum for all producers of the value of their sales (including any indirect taxes levied thereon), plus increases in their stocks, less their purchases of intermediate goods and services from other producers. For those producers, like general government, who do not generally sell their output, it includes output valued at cost instead of sales.

*Gross Domestic Product at Factor Cost* is that part of the cost of producing the Gross Domestic Product which consists of gross payments to factors of production (labour, land, capital and enterprise). It represents the value added by these factors in the process of production and is equivalent to Gross Domestic Product less indirect taxes plus subsidies. Gross Farm Product at Factor Cost is that part of Gross Domestic Product at Factor Cost arising from production in rural industries.

*Domestic Factor Incomes* is that part of the value added within a given period by factors of production which accrues as income to their suppliers after allowing for the depreciation of fixed capital. It is equivalent to Gross Domestic Product at Factor Cost less depreciation allowances.

*National Income* is the net income accruing within a given period to Australian residents from their services in supplying factors of production in Australia or overseas plus indirect taxes less subsidies. It is equivalent to Domestic Factor Incomes plus indirect taxes less subsidies and net income paid overseas. It is also equivalent to Gross Domestic Product less depreciation allowances and net income paid overseas.

*National Disposable Income* is the net income accruing within a given period to Australian residents from their services in supplying factors of production, from net indirect taxes and from re-distributive transfers. It is equivalent to National Income less net transfers overseas.

*National Turnover of Goods and Services* is the total flow within a given period of final goods and services (*i.e.* excluding any goods and services used up during the period in the process of production) entering the Australian economy from production and imports. This value is equivalent to Gross Domestic Product plus imports of goods and services, or, to Gross National Expenditure plus exports of goods and services.

*Gross National Expenditure* is the total expenditure within a given period on final goods and services (*i.e.* excluding goods and services used up during the period in the process of production) bought by Australian residents. It is equivalent to Gross Domestic Product plus imports of goods and services less exports of goods and services.

### Sectors

A brief description of the sectors into which the economy is divided for the purpose of National Accounts follows.

The *Corporate Trading Enterprise Sector* includes companies and public enterprises other than financial enterprises. It thus includes all trading enterprises other than unincorporated enterprises and dwellings owned by persons. This sector comprises only resident enterprises, but the concept of resident enterprises includes Australian subsidiaries and branches of overseas-owned companies and excludes overseas subsidiaries and branches of Australian companies. All public trading enterprises are included in this sector whether they are incorporated bodies or not.

The *Financial Enterprise Sector* includes both private and public financial enterprises. Financial enterprises are enterprises which are primarily engaged in financial transactions in the market consisting of both incurring liabilities and acquiring financial assets. These are organisations which are regarded as providing the financial mechanism for the functioning of the economy. They include life insurance and general insurance offices and superannuation funds as well as other organisations mainly engaged in borrowing and lending in the market.

The *Household Sector* includes all resident persons, their unincorporated enterprises located in Australia and dwellings owned by persons, and non-profit organisations serving households, other than non-profit organisations included in the Financial Enterprises Sector.

The *General Government Sector* excludes public financial and trading enterprises, but otherwise includes the whole of the activities of the Commonwealth Government, State Governments, local authorities and public corporations.

The *Overseas Sector Account* records all transactions between Australian persons, businesses and governments and overseas residents. Australian subsidiaries and branches of overseas companies are classified as resident units, while overseas subsidiaries and branches of Australian companies are classified as non-residents.

### Description of the Accounts

The *Domestic Production Account* is shown as receiving the revenue from the sale of goods and services to final buyers; all intermediate goods and services are cancelled out, since they represent a cost to one producer to offset the revenue of the other. On the payments side are shown the payments of indirect taxes less subsidies and, since the account is presented from the point of view of the producing unit, the wages and salaries paid to employees.

The *National Income and Outlay Account* is shown as receiving wages, salaries and supplements, net operating surplus and indirect taxes less subsidies from the Domestic

Production Account. From this income are deducted net payments of income and miscellaneous transfers to overseas, and the remainder is the National Disposable Income. The outlay side of the account shows this disposable income is largely used for final consumption expenditure and the balance is the nation's saving. The *National Income and Outlay Account* is a consolidation of the sector income and outlay accounts.

The *National Capital Account* is a consolidation of the sector capital accounts. It shows on the receipts side depreciation allowances transferred from the *Domestic Production Account* and saving transferred from the *National Income and Outlay Account* (or from the sector income and outlay accounts). On the payments side are shown purchases by all sectors of new buildings and capital equipment, the increase in stocks of all sectors and a balance described as net lending to overseas. This concept of net lending to overseas includes the increases (and, negatively, decreases) in Australia's overseas monetary reserves. The net lending to overseas is also the balance on the current transactions in the *Overseas Transactions Account*.

The *Overseas Transactions Account* records all transactions of a current nature between Australian and overseas residents. Although this is an account for the Overseas Sector, the items are named from the Australian viewpoint. The account shows that Australia's current receipts from overseas consist of the value of (Australia's) exports of goods and services, property income received from overseas and transfers from overseas. These receipts are used for (Australia's) imports of goods and services and payments of property income and transfers to overseas; and the balance of current receipts represents net lending to overseas. Positive net lending to overseas corresponds to a surplus on current transactions with overseas and negative net lending corresponds to a deficit.

#### Domestic Production Account, 1977-78

	\$m	\$m
Wages, salaries and supplements	51 567	
Gross operating surplus:		
Trading enterprises:		
Companies .....	10 591	
Unincorporated enterprises .....	10 655	
Dwellings owned by persons .....	5 932	
Public enterprises .....	2 013	
Financial enterprises .....	1 902	
Less Imputed bank service charge .....	2 358	
	<hr/>	
Gross Domestic Product at Factor Cost .....	80 302	
Indirect taxes less subsidies .....	10 379	
	<hr/>	
Gross Domestic Product .....	90 681	
Final consumption expenditure:		
Private .....	54 224	
Government .....	15 019	
Gross fixed capital expenditure:		
Private .....	13 053	
Public enterprises .....	4 165	
General government .....	3 648	
Increase in stocks .....	- 386	
Statistical discrepancy .....	1 476	
	<hr/>	
Gross National Expenditure	91 199	
Exports of goods and services ...	13 956	
	<hr/>	
National turnover of goods and services .....	105 155	
Less Imports of goods and services .....	14 474	
	<hr/>	
Expenditure on Gross Domestic Product .....	90 681	

## National Income and Outlay Account, 1977-78

	\$m		\$m
Final consumption expenditure:			
Private .....	54 224	Wages, salaries and supplements .....	51 567
Government .....	15 019	Net operating surplus .....	22 670
Saving .....	14 003		
		Domestic factor incomes ....	74 237
		Less Net income paid overseas .....	1 080
		Indirect taxes .....	10 831
		Less Subsidies .....	452
		National Income .....	83 536
		Less Net transfers to overseas .....	408
		Withholding taxes .....	118
Disposal of Income .....	83 246	National Disposable Income .....	83 246

## Overseas Transactions Account, 1977-78

	\$m		\$m
Exports of goods and services ...	13 956	Imports of goods and services ....	14 474
Property income from overseas	288	Property income to overseas .....	1 368
Transfers from overseas:			
Personal .....	409	Transfer to overseas:	
Withholding Taxes .....	118	Personal .....	365
Current receipts from overseas ....	14 771	General government .....	452
		Net lending to overseas .....	-1 888
		Use of current receipts .....	14 771

## National Capital Account, 1977-78

	\$m		\$m
Gross fixed capital expenditure:			
Private;		Depreciation allowances .....	6 065
Dwellings .....	3 877	Saving	
Other building and construction .....	2 268	Increase in income tax provisions .....	87
All other .....	6 908	Undistributed (company) income .....	1 665
Public enterprises .....	4 165	Retained income of public financial enterprises .....	238
General Government .....	3 648	Household saving .....	9 847
Increase in stocks:		General government surplus on current transactions .....	2 166
Farm and miscellaneous .....	-413	General government grants for private capital purposes .....	—
Private non-farm .....	27		
Statistical discrepancy .....	1 476		
Net lending to overseas .....	-1 888		
Gross accumulation .....	20 068	Finance of gross accumulation ....	20 068

The next three tables give details for South Australia of farm income, household income, and private final consumption expenditure respectively for the years 1973-74 to 1977-78.

Farm Income, South Australia<sup>(a)</sup>

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
\$ million					
Gross value of farm production:					
Wool (including skin wool) .....	173	122	132	154	145
Livestock slaughterings .....	190	113	136	203	238
Wheat .....	196	164	118	74	50
Other grain crops .....	77	128	113	100	56
Other crops .....	121	142	143	158	182
Other livestock products .....	43	49	47	47	57
Total .....	800	718	689	736	728
Less Stock valuation adjustments ...	26	-13	-10	-12	
Less Production costs other than wages and depreciation:					
Marketing costs .....	62	58	59	64	
Seed and fodder .....	52	59	58	62	
Other costs .....	126	154	182	191	
Gross farm product at factor cost ...	534	460	400	431	391
Indirect taxes less subsidies .....	26	35	40	45	33
Gross farm product at market prices .....	560	495	440	476	424
Less Depreciation .....	48	55	60	65	
Wages, net rent and interest paid and third party insurance transfers .....	78	108	116	115	
Indirect taxes less subsidies .....	26	35	40	45	33
Farm income .....	408	297	224	251	203

(a) Includes Northern Territory.

Household Income, South Australia<sup>(a)</sup>

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
\$ million					
Wages, salaries and supplements ....	2 599	3 432	3 934	4 546	4 952
Income of farm unincorporated enterprises .....	390	294	212	241	195
Income of other unincorporated enterprises .....	285	334	417	510	551
Income from dwellings .....	60	73	114	165	238
Transfers from general government	321	443	597	724	834
All other income .....	380	512	575	674	757
Total household income .....	4 035	5 088	5 849	6 860	7 527

**Household Income, South Australia<sup>(a)</sup> (continued)**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
\$ million					
<i>Less</i>					
Income tax paid .....	505	710	866	1 038	<i>n.y.a.</i>
Other direct taxes, fees, fines, etc.	46	50	60	72	<i>n.y.a.</i>
Consumer debt interest .....	67	82	101	117	<i>n.y.a.</i>
Transfers overseas .....					
<b>Household disposable income ....</b>	<b>3 417</b>	<b>4 246</b>	<b>4 822</b>	<b>5 633</b>	<b><i>n.y.a.</i></b>

(a) Includes Northern Territory.

**Private Final Consumption Expenditure, South Australia<sup>(a)</sup>**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
\$ million					
Food .....	501	600	714	839	942
Cigarettes and tobacco .....	74	90	108	123	124
Alcoholic drinks .....	152	181	232	256	276
Clothing, etc. ....	248	295	347	397	424
Health .....	171	225	282	314	353
Rent .....	299	370	475	606	760
Gas, electricity, fuel .....	50	58	71	84	94
Household durables .....	250	312	400	442	418
Newspapers, books, etc. ....	39	49	61	72	82
All other goods <i>n.e.i.</i> .....	112	139	173	197	221
Travel and communication .....	404	511	618	686	738
All other services .....	304	374	437	508	568
Total .....	2 604	3 204	3 918	4 524	5 000

(a) Includes Northern Territory.

**Further References**

Additional information may be found in the following publications:

**South Australian Office**5501.4      *Public Finance*

Central Office

5204.0      *Australian National Accounts*

PART 12

## PRIVATE FINANCE

### 12.1 BANKING AND CURRENCY

#### BANKING

The banking system in Australia comprises a central bank (the Reserve Bank of Australia); thirteen trading banks (one owned by the Commonwealth Government, three by State Governments, and nine privately owned); the Commonwealth Development Bank and the Australian Resources Development Bank Ltd (specialist banks, owned respectively by the Commonwealth Government and a consortium of the seven major trading banks), the Primary Industry Bank of Australia Ltd, and thirteen savings banks of which one is owned by the Commonwealth Government and three by State Governments, two are trustee savings banks, and seven are associated with privately owned trading banks.

#### LEGISLATION

Under Section 51 of the Constitution Act the Commonwealth Parliament has power to legislate with respect to 'Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money'.

The principal Acts at present in force relating to banking are:

- (a) the *Reserve Bank Act* 1959, providing for the constitution and management of the Reserve Bank and the management of the Australian note issue;

- (b) the *Commonwealth Banks Act* 1959, providing for the constitution and management of the Commonwealth Banking Corporation; and
- (c) the *Banking Act* 1959, providing for the regulation of banking and the protection of the currency and public credit of Australia.

The *Banking Act* 1959 applies to all banks operating in Australia or its Territories, except State banks trading in their own State. The objects of the Act are: (1) to provide a uniform legal framework for regulating the banking system; (2) to safeguard depositors from loss; (3) to provide for the co-ordination of banking policy under the direction of the Reserve Bank; (4) to control bank interest rates and the volume of credit in circulation; (5) to provide machinery for the control of foreign exchange.

State banking legislation relates to the incorporation of banks and the constitution and management of State Banks. South Australian Acts at present in force relating to banking are the State Bank Act, 1925-1978 and the Savings Bank of South Australia Act, 1929-1978.

### RESERVE BANK OF AUSTRALIA

The Reserve Bank of Australia functions as a central bank, controls the Australian note issue through the Note Issue Department, provides special banking facilities through the Rural Credits Department, and acts as banker to the Commonwealth and some of the States. Liabilities and assets of each department of the Reserve Bank are shown in the table below.

**Reserve Bank of Australia, Liabilities and Assets at 30 June 1979**

Particulars	Central Bank Department	Note Issue Department	Rural Credits Department	Total (a)
LIABILITIES (\$'000)				
Capital .....	40 000	—	9 428	49 428
Reserves .....	863 621	980 500	59 976	1 904 097
<b>Special Reserve:</b>				
International Monetary Fund				
Special Drawing Rights .....	321 302	—	—	321 302
Notes on issue .....	—	4 113 253	—	4 113 253
<b>Deposits:</b>				
Statutory reserve deposits ...	1 115 504	—	—	1 115 504
Other trading banks deposits	21 048	—	—	21 048
Savings bank deposits .....	815 719	—	—	815 719
Other deposits .....	2 745 677	—	4 660	(a) 1 782 637
Other liabilities .....	82 719	37 025	448 380	(a) 123 552
Total .....	6 005 590	5 130 778	522 444	(a) 10 246 540
ASSETS (\$'000)				
Gold and foreign exchange (b) ...	2 564 592	1 142 227	—	3 706 819
<b>Australian Government</b>				
securities .....	2 219 979	2 953 247	—	5 173 226
Other assets .....	1 221 019	1 035 304	522 444	(a) 1 366 495
Total .....	6 005 590	5 130 778	522 444	(a) 10 246 540

(a) Inter-departmental accounts totalling \$1 412 272 000 have been offset in totals.

(b) Includes IMF Special Drawing Rights.

The policy of the Reserve Bank is determined by a Board consisting of the Governor of the Reserve Bank (Chairman), the Deputy Governor, the Secretary to the Treasury, and seven other members appointed by the Governor-General. The Bank is managed by the Governor, who acts in accordance with the policy of the Board and with any directions of the Board. The Bank is required to inform the Government of the monetary and banking policy of the Board. In the event of a disagreement between the Government and the Board as to whether the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia, the Governor-General, acting with the advice of the Executive Council, may determine the policy to be adopted by the Bank.

Further details of the activities of the Reserve Bank are given in the *Year Book Australia*.

#### COMMONWEALTH BANKING CORPORATION

The Commonwealth Banking Corporation was established under the *Commonwealth Banks Act* 1959 and commenced operations on 14 January 1960. It is the controlling body for the Commonwealth Trading Bank, the Commonwealth Savings Bank and the Commonwealth Development Bank.

Particulars relating to the Development Bank are given below, while details of the other two banks are included in later sections relating to trading banks and savings banks.

##### **Commonwealth Development Bank**

The Commonwealth Development Bank is a supplementary source of finance for primary production and for the establishment or development of industrial undertakings and does not compete with conventional lenders, but provides financial help when such help is thought desirable and finance is not otherwise available on suitable terms. The primary consideration of the Bank's operations in deciding whether finance should be made available is the prospect of success and not necessarily the value of security available.

In South Australia all the major private banks and the State Bank of South Australia are agents of the Commonwealth Development Bank for the receipt of loan applications. The averages of weekly figures for loans, advances and bills discounted for the month of June in the years 1976 to 1979 were \$369, \$406, \$458 and \$482 million respectively. Of the last mentioned amount, \$55.3 million was advanced in South Australia.

At 30 June 1979 the capital of the Commonwealth Development Bank was \$61.7 million.

#### AUSTRALIAN RESOURCES DEVELOPMENT BANK LIMITED

This corporation was formed by the major trading banks with the support of the Reserve Bank and was given bank status by an amendment to the Banking Act in 1967. It provides finance for the development of Australia's natural resources mainly in the form of refinanced trading bank loans but also by direct lending and equity participation. Other services offered to intending developers include the organising of consortia financing, assessments of feasibility and independent verification of reserves. The averages of weekly figures for loans and advances outstanding (including refinanced loans) for the month of June in the years 1976 to 1979 were \$559, \$592, \$660 and \$643 million respectively. This finance is provided from the Australian capital market (mainly in the form of public issues of transferable deposits) and from subordinated loans by the shareholding banks and the Reserve Bank of Australia. Overseas borrowing remains a minor source of funds.

Authorised capital of the Bank is \$20 million of which \$7 million had been issued as fully paid capital at 30 September 1979. The shareholders (the major trading banks) have approximately equal shareholdings. Although not a shareholder, the Reserve Bank of Australia initially subscribed \$2.1 million in loan capital on which interest is paid.

### THE PRIMARY INDUSTRY BANK OF AUSTRALIA LIMITED

The Primary Industry Bank of Australia Limited commenced operations on 22 September 1978 under the authority of the *Primary Industry Bank Act* 1977. The Bank has also been brought within the scope of the *Banking Act* 1959 including those provisions relating to the protection of depositors, advances policy, control of interest rates, furnishing of statistics, and alterations in the structure and ownership of the Bank.

The main objective of the Bank is to facilitate the provision of loans to primary producers for longer terms than are otherwise generally available. The Bank's role is restricted to refinancing loans made by banks and other financial institutions with terms of eight years or more but not exceeding thirty years.

The initial equity capital of the Bank is \$5 625 000 consisting of nine shares of \$625 000. Eight shares are held by the Australian Government and the seven major trading banks while the ninth share is held equally by the four State banks.

### TRADING BANKS

For statistical purposes trading banks are often divided into two groups, 'major' and 'other'. The 'major trading banks' comprise the six private trading banks and the Commonwealth Trading Bank, all of which have interests throughout Australia: in June 1979 they accounted for approximately 87 per cent of all general trading bank assets in Australia.

The group 'other trading banks' consist of the three State Government banks (including the State Bank of South Australia) which trade mainly in their respective States, and three other banks (two of them overseas institutions) whose business is either specialised (*e.g.* financing overseas trade), or both specialised and limited to particular areas.

#### Banks Originating in South Australia

With a subscribed capital of \$500 000 in 50 000 shares of \$10 each, the first trading bank promoted in South Australia was The Bank of Adelaide which was opened for business on 11 December 1865 and now has branches in all States and the Australian Capital Territory.

Pursuant to the State Advances Act of 1895 the State Bank of South Australia commenced business in 1896. The original Act directed that advances were to be made on first mortgage to farmers, other primary producers and local government authorities. The State Bank Act, 1925 repealed the State Advances Act, and enlarged the scope of the activities of the Bank by making provision for loans on overdraft and all business of general banking. The State Bank also administers the following Acts on behalf of the State:

- Advances to Settlers Act, 1930-1972;
- Loans to Producers Act, 1927-1962;
- Loans for Fencing and Water Piping Act, 1938-1975;
- Student Hostels (Advances) Act, 1961.

The State Bank of South Australia does not operate branches or agencies outside the State.

### Assets

Under the provisions of the *Banking Act* 1959 all trading banks (except State banks trading in their own State) have limitations on their portfolio of assets. These banks are required to maintain a fixed percentage of total deposits as a Statutory Reserve Deposit (SRD) with the Reserve Bank. The SRD ratio for major trading banks changed during 1979 to 4.5 per cent on 16 January, to 5.5 per cent on 2 March and to 6 per cent on 6 December.

The major trading banks are also required by agreement to hold a certain percentage of total deposits in the form of liquid assets or government securities. This minimum LGS ratio which had remained at 18 per cent from 1962 was changed temporarily to 23 per cent in February 1976 but reverted to 18 per cent on 1 April 1977.

The following table gives some particulars of assets held by trading banks in Australia. The figures quoted are averages of assets at the close of business on each Wednesday in June 1979.

**Trading Banks: Assets Within Australia, June 1979<sup>(a)</sup>**

Assets	Major Trading Banks	Other Trading Banks	All Trading Banks
		\$'000	
Gold, bullion and Australian notes .....	399 291	27 218	426 509
Cash with Reserve Bank .....	7 241	1 586	8 827
Commonwealth public securities:			
Commonwealth Government and State .....	3 780 262	375 369	4 155 630
Local authorities and public corporations ....	36 147	35 640	71 787
Statutory Reserve Deposit Account with Reserve Bank .....	1 105 038	20 486	1 125 523
Loans to authorised dealers in short-term money market .....	199 910	65 368	265 278
Other loans, advances and bills discounted .....	15 011 660	2 556 260	17 567 921
Bank premises, furniture and sites .....	395 870	99 500	495 369
Other assets .....	4 474 368	558 967	5 033 335
Total assets .....	25 409 786	3 740 392	29 150 178

(a) Excludes inter-branch accounts and contingencies.

### Branches and Agencies

Of the thirteen trading banks which operate in Australia, the nine banks listed below conduct business in South Australia:

Government banks;

Commonwealth Trading Bank of Australia

State Bank of South Australia

Private banks;

Australia and New Zealand Banking Group Ltd

The Bank of Adelaide

Bank of New South Wales

Commercial Bank of Australia Ltd

Commercial Banking Company of Sydney Ltd

National Bank of Australasia Ltd  
 Banque Nationale de Paris

**Trading Banks: Branches and Agencies at 30 June, South Australia**

Bank	Branches			Agencies		
	1977	1978	1979	1977	1978	1979
Commonwealth Trading Bank .....	62	66	69	33	30	28
State Bank of South Australia .....	37	36	37	17	18	18
Private banks .....	359	361	360	91	86	83
Total—Metropolitan area (a) .....	258	262	264	53	41	40
Country .....	200	201	202	88	93	89
Total State .....	458	463	466	141	134	129

(a) As determined by individual banks for administrative purposes.

**Deposits, Advances and Debits to Customers Accounts**

Deposits not bearing interest are on current account and may be withdrawn on demand. Deposits bearing interest include some deposits on current account but most are deposits for fixed terms ranging from three months to four years and for large amounts from thirty days to four years.

Debits to customers accounts generally represent the total of all cheques drawn by customers of the banks.

**Trading Banks: Balance of Deposits and Advances and Debits to Customers Accounts  
 South Australia<sup>(a)</sup>**

Year	Depositors Balances			Loans, Advances, and Bills Discounted (b)	Debits to Customer Accounts (c)	Proportion to Total Deposits		
	Bearing Interest	Not Bearing Interest	Total			Deposits Bearing Interest	Loans, Advances, and Bills Discounted (b)	
1975 .....	634 284	339 216	973 499	\$'000	748 609	494 399	65.2	76.9
1976 .....	822 826	391 662	1 214 488		914 300	677 192	67.8	75.3
1977 .....	886 175	414 707	1 300 883		1 146 860	790 080	68.1	88.2
1978 .....	871 839	429 677	1 301 516		1 370 681	848 596	67.0	105.3
1979 .....	944 182	492 777	1 436 958		1 642 474	924 668	65.7	114.3

(a) Average of weekly figures for month of June.

(b) Excludes loans to authorised dealers in the short-term money market.

(c) Includes the Rural Credits Department of the Reserve Bank and the Commonwealth Development Bank.

The following table relates to trading bank advances outstanding for all banks in South Australia and the Northern Territory except the State Bank of South Australia and the Banque Nationale de Paris. Advances are classified according to type of borrower in July of each year from 1975 to 1979.

**Major Trading Banks, South Australia and Northern Territory**  
**Advances to Resident Borrowers by Type of Borrower<sup>(a)</sup>**  
**(At Second Wednesday in July)**

Classification	1975	1976	1977	1978	1979
\$ million					
<b>Business advances:</b>					
Agriculture, grazing and dairying					
(b) .....	91.8	108.8	122.9	157.8	202.9
Manufacturing .....	66.7	67.0	93.1	94.0	105.9
Transport, storage and communication .....	9.9	13.0	16.7	17.9	18.6
Finance .....	21.5	19.1	27.4	32.6	32.8
Commerce;					
Retail trade .....	42.1	51.9	66.1	82.3	102.2
Wholesale trade (c) .....	21.7	28.4	37.6	36.1	49.7
Total commerce .....	63.8	80.2	103.6	118.4	151.9
Building and construction .....	21.3	25.4	38.3	44.1	47.9
Other business .....	81.9	96.4	109.9	126.9	150.4
Unclassified .....	5.4	11.2	15.4	13.6	18.4
Total business advances ...	362.3	421.1	527.4	605.4	728.9
<b>Distribution of business advances:</b>					
To companies .....	199.2	225.8	298.4	319.0	384.1
Other .....	163.1	195.3	228.9	286.4	344.7
Advances to public authorities .....	1.6	3.1	2.1	4.6	5.8
<b>Personal advances:</b>					
Building or purchasing own home	40.7	52.8	60.8	69.6	78.5
Other .....	141.8	202.3	286.6	369.3	445.6
Total personal advances ...	182.5	255.1	347.4	438.9	524.0
Advances to non-profit organisations	3.8	4.5	5.6	6.9	7.0
Total advances to resident borrowers .....	550.2	683.7	882.5	1 055.7	1 265.7

(a) Covers advances by the Commonwealth Trading Bank and all private trading banks, but excludes advances by the State Bank of South Australia and the Banque Nationale de Paris. 'Resident borrowers' comprise all institutions (including branches of overseas institutions) engaged in business in Australia and individuals permanently residing in Australia.

(b) Includes farm development loan component.

(c) Includes temporary advances to woolbuyers.

### Interest Rates

Bank interest rates are not formally determined under the Banking Act. Maximum rates are fixed after discussions between the Reserve Bank and the banks, and with the approval of the Treasurer. State Government banks, although not bound by rulings of the Reserve Bank, tend to conform to them.

### SAVINGS BANKS

#### Development of Savings Banks

The prime object of the foundation of savings banks in Australia was the encouragement of thrift. Generally, depositors cannot operate on their savings accounts by means of cheques, although most savings banks extend this facility to non-profit organisations

such as friendly, co-operative and charitable societies. In addition the Savings Bank of South Australia is one of only two banks in Australia which pays interest on personal cheque accounts. Savings accounts have the advantages that deposits may be withdrawn on demand and that depositors receive interest on their minimum monthly balances. No charge is made by the banks for keeping these accounts or the cheque accounts of some non-profit organisations. However, early in 1970 concessions relating to charges and interest on trading accounts were withdrawn from hospital and medical benefit organisations, building societies, credit unions and investment clubs.

Post Offices in South Australia acted as agencies for the Savings Bank of South Australia until 1912 when they became agents of the Commonwealth Bank.

Savings bank business was conducted exclusively by these two government banks until 1956, when the first of the private banks entered this field. Savings bank facilities in South Australia are now provided by the eight banks listed below:

**Government;**

Commonwealth Savings Bank of Australia

Savings Bank of South Australia

**Private;**

Australia and New Zealand Savings Bank Ltd

The Bank of Adelaide Savings Bank Ltd

Bank of New South Wales Savings Bank Ltd

Commercial Savings Bank of Australia Ltd

CBC Savings Bank Ltd

National Bank Savings Bank Ltd

**Savings Bank of South Australia**

The Savings Bank of South Australia commenced operations on 11 March 1848 following the enactment of an ordinance in 1847. At 30 June 1979 there were 151 branches, 624 agencies and 833 school bank agencies within South Australia. The Savings Bank of South Australia has agent banks to act for it in other Australian States and has conducted its own office in Pall Mall, London, since September 1975.

The total of depositors balances at 30 June 1979 amounted to more than \$1 023 million. During 1978-79, the Bank made loans exceeding \$130.7 million to depositors for housing, for rural development and for institutional and other purposes, and at 30 June 1979 the total of such loans outstanding was over \$477 million.

**Savings Bank of South Australia, Summary of Business**

Year	Operative Accounts	Cash Turnover (a)	Depositors Balances (b)	Loans (b) (c)	Government Securities Held (b) (d)
	No.	\$m		\$'000	
1974-75 .....	1 064 468	3 037	697 458	396 454	166 865
1975-76 .....	1 074 646	3 821	776 473	457 096	176 578
1976-77 .....	1 078 799	4 224	842 842	533 707	184 344
1977-78 .....	1 078 864	5 344	919 756	613 114	184 124
1978-79 .....	1 086 560	6 277	1 023 805	707 623	172 308

(a) Sum of deposits and withdrawals; includes some duplication from amounts transferred by depositors from one type of account to another. (b) At end of year, as published in the Bank's Annual Report. (c) Includes loans guaranteed by South Australian Government and to statutory and local government bodies.

(d) Commonwealth Government Securities only.

### Branches and Agencies

The increase in number of branches of savings banks in recent years is due mainly to the increase in branches of private banks in the metropolitan area. However, the number of agencies of savings banks has decreased each year since 1968.

**Savings Banks: Branches and Agencies at 30 June, South Australia**

Bank	Branches			Agencies		
	1977	1978	1979	1977	1978	1979
Commonwealth Savings Bank ....	81	82	83	618	617	619
Savings Bank of South Australia	143	145	151	653	639	624
Private banks .....	359	360	358	472	458	429
Total—Metropolitan area (a)	344	348	352	1 140	1 125	1 081
Country .....	239	239	240	603	589	591
Total State .....	583	587	592	1 743	1 714	1 672

(a) As determined by individual banks for administrative purposes.

### School Banking

Special banking facilities for school children were introduced into South Australia with the inauguration of the School Banking Department of the Savings Bank of South Australia on 28 April 1908. The Commonwealth Savings Bank of Australia and some private banks provide similar services at some private schools. However, the Savings Bank of South Australia has sole access to State schools, and retains a major share of school banking business. With a view to encouraging thrift in school children, deposits as small as one cent are accepted.

Details of school banking in this State are as follows:

		Agencies	Operative Accounts '000	Depositors Balances \$'000
30 June	1975 .....	902	155	3 808
	1976 .....	881	153	4 095
	1977 .....	877	149	4 366
	1978 .....	880	146	4 651
	1979 .....	879	141	4 902

### Assets

Under the provisions of the *Banking Act* 1959 all savings banks (except State banks trading in their own State) are required to maintain in prescribed investments an amount that together with cash on hand in Australia is not less than the amount on deposit in Australia with the savings bank. These prescribed investments include deposits with the Reserve Bank, deposits with or loans to other banks, Commonwealth Government or State securities, loans for housing, loans to authorised dealers in the short-term money market and loans to the Australian Banks Export Refinance Corporation Ltd.

A further limitation on the portfolio of assets held by savings banks is that they are required to hold in cash and other prescribed assets, funds equivalent to 45 per cent of depositors balances. Within this amount, funds equivalent to 7·5 per cent of depositors balances must be held in deposits with the Reserve Bank and in Treasury notes. The ratio was previously 50 per cent but was varied by an amendment to the Banking (Savings Bank) Regulations on 27 May 1977.

### Deposits

The total of depositors balances in savings banks per head of population has for this State been consistently well above the Australian average.

The following table shows details of savings banks accounts and deposits for South Australia and Australia at 30 June for the years 1975 to 1979.

**Savings Banks: Accounts and Deposits, South Australia and Australia**

At 30 June	South Australia			Australia		
	Accounts Operative (a)	Depositors Balances	Deposits per Head of Population	Accounts Operative (a)	Depositors Balances	Deposits per Head of Population
	'000	\$m	\$	'000	\$m	\$
1975 .....	1 991	1 394.6	1 125	19 390	12 868.5	934
1976 .....	2 049	1 617.3	1 282	20 171	14 822.5	1 065
1977 .....	2 108	1 780.8	1 395	20 667	16 365.3	1 163
1978 .....	2 131	1 945.3	1 511	21 024	18 046.3	1 267
1979 .....	2 163	2 138.3	1 653	21 423	19 832.5	1 380

(a) Excludes school bank and inoperative accounts.

The Savings Bank of South Australia has always held a very high proportion of the total of depositors balances in this State, although its share of total on deposit has dropped from about 75 per cent in 1961 to approximately 48 per cent in 1979. During that time the private banks have increased their share from less than 12 per cent to approximately 29 per cent.

**Savings Bank Deposits, South Australia**

At 30 June	Commonwealth Savings Bank	Savings Bank of South Australia	Private Savings Banks	Total
\$million				
1975 .....	322.9	697.5	374.2	1 394.6
1976 .....	374.4	776.5	466.5	1 617.3
1977 .....	412.0	842.8	526.1	1 780.8
1978 .....	452.0	919.7	573.7	1 945.3
1979 .....	486.5	1 023.7	628.1	2 138.3

The next table gives an indication of the amount of business conducted by savings banks during each of the last five years.

**Movements in Savings Bank Deposits, South Australia**

Year	Amount on Deposit at Beginning of Year	Deposits during Year (a)	Withdrawals during Year (a)	Interest Added during Year	Increase in Depositors Balances during Year	Amount on Deposit at End of Year
\$million						
1974-75 .....	1 174.8	3 135.6	2 982.0	66.2	219.8	1 394.6
1975-76 .....	1 394.6	3 754.0	3 612.5	81.2	222.8	1 617.3
1976-77 .....	1 617.3	4 324.9	4 254.8	93.4	163.5	1 780.8
1977-78 .....	1 780.8	5 036.3	4 974.3	102.5	164.5	1 945.3
1978-79 .....	1 945.3	5 754.5	5 672.4	110.9	193.0	2 138.3

(a) Includes inter-branch transfers.

**CURRENCY**

Under the Commonwealth Constitution the control of currency, coinage and legal tender in Australia is vested in the Commonwealth.

The Commonwealth Treasurer is empowered by legislation to arrange for the making and issuing of coins of specified denominations. Australia's coin requirements are met by the Royal Australian Mint in Canberra. Australian notes are printed by the Note Printing Branch of the Reserve Bank in Melbourne, while their issue is controlled by the Note Issue Department of that bank.

Notes in circulation are of the denominations \$1, \$2, \$5, \$10, \$20, and \$50. Coins in circulation are 1 cent and 2 cent (bronze) and 5, 10, 20 and 50 cents (cupro-nickel).

**Notes in Circulation, Australia**

Denomination	Last Wednesday in June				
	1975	1976	1977	1978	1979
\$million					
\$1 .....	52.7	53.6	57.4	60.8	64.7
\$2 .....	129.1	127.8	133.0	136.0	140.6
\$5 .....	110.2	116.4	121.8	126.7	135.5
\$10 .....	675.2	655.2	628.8	604.5	582.4
\$20 .....	1 186.7	1 334.6	1 489.0	1 620.5	1 756.4
\$50 .....	403.2	633.8	860.8	1 121.7	1 427.7
Total .....	2 557.1	2 921.4	3 290.8	3 670.2	4 107.4
Notes held by:					
Banks .....	339.9	352.5	378.1	413.1	451.1
Public .....	2 217.1	2 568.9	2 912.8	3 257.1	3 656.3

Minting of the 50 cent coin in its original form of 80 per cent silver and 20 per cent copper, ceased in April 1968. A twelve-sided version of the 50 cent coin, in cupro-nickel, was issued in September 1969. Special 50 cent coins were issued in 1970 to commemorate the two-hundredth anniversary of Captain James Cook's discovery of the east coast of

Australia, and in 1977 to commemorate the twenty-fifth anniversary of Queen Elizabeth's accession to the throne.

More complete details of Australian currency, including historical references, were included on pages 552-6 of the *South Australian Year Book* 1968.

#### Further References

Further information may be found in the following publications:

##### South Australian Office

5603.4    *Private Finance*

##### Central Office

5601.0    *Banking and Currency*

5602.0    *Savings Banks, Australia*

5603.0    *Major Trading Banks, Australia*

5605.0    *Banking*.

## 12.2 INSURANCE

### LIFE INSURANCE

The activities of life insurance companies operating in South Australia have been regulated by Commonwealth legislation since 1945. Under the *Life Insurance Act* 1945, every company transacting life insurance business must be registered and must lodge a deposit of up to \$100 000, as security for policy holders, with the Commonwealth Treasurer. The Act is administered by the Insurance Commissioner who has wide powers of inquiry into the activities of any registered company.

Each company must establish at least one statutory fund and all moneys received in respect of life insurance business must be paid to, and form part of, the assets of these funds. An actuarial investigation must be conducted at least once every five years, with the distribution of shareholders dividends and policy holders bonuses subject to sufficient surplus being revealed by such investigation. All premiums must be actuarially approved and the Commissioner has powers to suppress policies or proposals which he deems misleading.

Companies are required to furnish to the Commissioner certain accounting reports and statistical returns and it is from these returns that the statistical details in this section are obtained.

The individual returns cover operations for the accounting year ending in the calendar year shown. For a majority of companies the closing date is 31 December, but a number balance earlier in the year.

In accordance with the *Life Insurance Act* 1945, businesses are required to maintain separate registers for Ordinary, Industrial and Superannuation classes of insurance business. With the consent of the Life Insurance Commissioner, however, transfers between registers can occur. As the significance of industrial insurance has been declining, and as more business have been declining, and as more businesses have been transferring it to the Ordinary registers only a few businesses now maintain registers of industrial insurance. In order to preserve the confidentiality of these businesses' operations it has become necessary to combine the details of ordinary and industrial business in this publication.

During 1978, there were thirty-nine companies conducting ordinary and industrial life insurance business in South Australia; thirty-four also undertook superannuation busi-

ness, i.e. the issuing of policies to the trustees of funds established for the provision of superannuation or retirement benefits.

With the passing of the State Government Insurance Commission Act Amendment Act, 1977, the Commission, which from 1972 has been undertaking general insurance business, was empowered to enter the life insurance field and it began accepting life insurance business on 1 March 1978.

### Policies Existing

There has been a rapid growth in life insurance business since the end of 1945 when, for policies existing, the sum insured plus bonus additions amounted to \$130 million; by 1956 the \$500 million mark was reached and by 1978 the figure was \$7 590 million.

The next table illustrates the growth in life insurance business over the last ten years.

**Life Insurance: Policies Existing, South Australia**

Year	Ordinary			Industrial (a)			Superannuation		
	Policies	Sum Insured	Annual Premiums	Policies	Sum Insured	Annual Premiums	Policies	Sum Insured	Annual Premiums
1969 .....	No.	\$'000	\$'000	No.	\$'000	\$'000	No.	\$'000	\$'000
1969 .....	523 417	1 588 831	41 321	257 049	101 077	4 163	48 453	341 571	11 588
1970 .....	550 226	1 802 721	46 011	253 464	111 065	4 493	49 784	399 458	13 347
1971 .....	580 218	2 073 174	51 801	249 993	123 800	4 894	51 275	470 677	15 882
1972 .....	608 290	2 374 762	58 022	241 651	135 827	5 263	52 875	542 580	17 921
1973 .....	642 956	2 757 993	63 221	237 018	149 526	5 756	52 292	658 235	20 543
1974 .....	657 011	3 150 075	68 845	224 517	157 078	5 901	54 059	868 020	25 992
1975 .....	667 507	3 653 848	74 707	210 213	161 548	5 984	55 320	1 112 366	33 494
1976 .....	666 013	4 130 495	78 574	194 363	165 528	6 043	56 861	1 370 498	40 537
1977 .....	657 077	4 582 356	80 947	180 003	165 752	6 003	61 450	1 622 228	46 679
1978 .....	804 784	5 210 393	87 995	(b)	(b)	(b)	51 100	1 839 963	51 154

(a) Includes industrial business for the Northern Territory.

(b) Industrial included with Ordinary.

In the following table, the distinction between endowment insurance and an endowment policy is that endowment insurance provides for the payment of the sum insured upon the insured person reaching a specified age or upon his prior death, whereas the sum insured under an endowment policy is paid only upon the insured person reaching the specified age.

**Life Insurance: Policies Existing, South Australia, 1978**

Type of Policy	Ordinary and Industrial (a)			Superannuation	
	Sum Insured	Annual Premiums	\$'000	Sum Insured	Annual Premiums
Whole life insurances .....	2 840 457	49 705	231 537	5 547	
Endowment insurances ....	670 571	27 892	342 759	12 960	
Other insurances .....	1 681 523	9 207	1 248 942	31 837	
Endowment .....	17 842	1 191	16 724	810	
Total .....	5 210 393	87 995	1 839 963	51 154	

(a) Includes industrial business for the Northern Territory.

### New Policies

During 1978 a total of 56 741 new life insurance policies, with a sum insured of \$1 328 572 082, were issued in South Australia. The value, *i.e.*, sum insured, of new policies has increased continuously since 1945.

The number and value of new policies issued during the five years to 1978 are shown in the next table.

**Life Insurance: New Policies Issued, South Australia**

Class of Business	1974	1975	1976	1977	1978
Ordinary and Industrial (a)	67 292	62 788	58 291	52 691	50 512
Superannuation .....	8 706	9 858	9 904	9 565	6 229
Total .....	75 998	72 646	68 195	62 256	56 741
			NUMBER		
Ordinary and Industrial (a)..	608 765	736 224	810 604	857 215	938 998
Superannuation .....	300 011	359 673	390 160	416 690	389 575
Total .....	908 775	1 095 897	1 200 765	1 273 906	1 328 572
			SUM INSURED (\$'000)		

(a) Includes industrial business for the Northern Territory.

Annual premiums on new policies issued in 1978 amounted to \$21 593 277 and of this amount \$4 449 373 was for endowment insurances and \$7 209 211 for whole of life insurances. Details of sum insured and premiums payable for the various types of policy issued in 1978 are shown in the following table.

**Life Insurance: New Policies Issued, South Australia, 1978**

Type of Policy	Ordinary and Industrial (a)		Superannuation	
	Sum Insured	Annual Premiums	Sum Insured	Annual Premiums
Whole life insurances .....	378 287	6 359	36 503	851
Endowment insurances ....	61 647	1 907	70 626	2 542
Other insurances .....	498 452	2 740	278 604	7 015
Endowment .....	612	29	3 842	152
Total .....	938 998	11 034	389 575	10 559

(a) Includes industrial business for the Northern Territory.

### Annuity Business

Life insurance companies also issued annuity policies but this form of business is at present a relatively minor aspect of life insurance activity. In 1978 there were 157 policies in existence with total annuities per annum of \$69 627.

### Policies Discontinued

The following table gives details of policies discontinued according to reason for discontinuance. Policies discontinued or reduced includes policies matured, surrendered or forfeited. In addition, this item includes transfers to and from registers within and between States and Territories and between Australia and overseas and revaluations of sums insured under existing policies. These transfers and revaluations may result in either negative or positive changes to values in the 'policies discontinued' item.

**Life Insurance: Policies Discontinued or Reduced, South Australia, 1978**

Cause	Ordinary and Industrial (a)		Superannuation	
	Policies	Sum Insured	Policies	Sum Insured
No.	\$'000	No.	\$'000	
Death .....	3 445	8 947	151	3 126
Maturity .....	21 419	18 377	950	12 182
Surrender .....	46 396	319 849	4 034	138 805
Forfeiture .....	12 482	169 332	578	15 045
Transfer .....	825	4 724	611	7 915
Other .....	—1 759	—45 251	10 255	—5 233
Total .....	82 808	475 978	16 579	171 840

(a) Includes industrial business for the Northern Territory.

### Premiums and Claims

Details of premium income and of cash payments made in respect of policies are shown in the following table. This table does not show investment income or management and commission expenses and accordingly is not a revenue and expenditure table.

**Life Insurance: Premiums and Policy Payments, South Australia**

Year	Premiums and Considerations for Annuities	Death or Disability (a)	Payments				
			Maturity	Surrenders	Annuities	Cash Bonuses	Total
			\$'000				
1974 .....	100 290	12 528	23 219	22 869	121	196	58 933
1975 .....	114 824	14 296	24 599	27 776	86	395	67 152
1976 .....	124 781	14 358	26 602	31 448	85	369	72 862
1977 .....	135 553	16 368	31 627	34 992	66	539	83 592
1978 .....	143 205	17 874	35 175	42 245	59	581	95 935

(a) Includes 'Other'.

### Loans Outstanding

In the following table details are given of mortgages on South Australian real estate, loans on policies registered in, and 'other' loans to persons resident in this State. Only those loans which form assets of the statutory funds are included.

## Life Insurance: Loans Outstanding, South Australia

Loans	1974	1975	1976	1977	1978
\$'000					
Loans on:					
Mortgage of real estate Policies;	83 150	84 969	85 926	87 581	84 771
Advance of premiums	4 729	5 070	5 579	5 413	4 701
Other .....	22 093	22 352	22 738	23 979	25 496
Other .....	2 618	2 209	2 231	2 125	3 552
Total .....	112 591	114 600	116 474	119 098	118 519

## GENERAL INSURANCE

General insurance in South Australia is conducted by private organisations and the State Government Insurance Commission which commenced business in January 1972. Some Government insurance, in particular workers' compensation, is carried by the Government Insurance Fund which is administered by the Government Insurance Office. In addition, the State Bank of South Australia insures certain properties on which it has provided mortgage finance.

A number of Commonwealth Government instrumentalities also are engaged in insurance in South Australia, notably in respect of housing loans and export payments, but these activities are not included in South Australian statistics.

Companies, persons or firms of persons carrying on general insurance business are required under the Stamp Duties Act, 1923-1978 to take out an annual licence, such licence being the authority to carry on insurance business in the State. The licence fee varies with premium income. Under the Fire Brigades Act, 1936-1976 insurance companies contribute approximately 75 per cent of the cost of maintaining the services of the Fire Brigades Board.

Insurance for workers' compensation and motor vehicle third party risks is compulsory under State legislation. Employers, unless specifically exempted, are required under the Workers Compensation Act, 1971-79 to effect an insurance cover providing compensation for workmen suffering injuries in the course of their employment. Details of workers' compensation provisions are given in Part 7.4.

Under the Motor Vehicles Act, 1959-1978 all vehicles other than those belonging to the Crown must be covered by a third party policy protecting the owner against any liability for death or injury to others resulting from use of the vehicle. Particulars are given in Part 10.4.

Legislation affecting all insurance companies operating in Australia is embodied in the *Insurance Act* 1973 which seeks to ensure the continued financial stability of these companies. This Act is concerned only with the solvency of all companies engaged in insurance business and not with contractual arrangements between policy holders and insurers or with the rate of premiums charged. It also provides for the continuation of the provisions of the State Acts referred to above. The *Insurance (Deposits) Act* 1932 ceased to exist on 1 August 1979 and deposits lodged with the Commonwealth Treasurer under that Act were returned to all currently authorised insurers. However, deposits being retained for a number of companies in liquidation, will be returned at a later stage of their liquidation.

The statistics in this section are compiled from returns covering transactions of the State Government Insurance Commission, the Government Insurance Fund, State Bank and approximately 100 companies and company groups licensed to conduct general insurance business. Each return gives details of the organisation's activities during a twelve-month period ending within the year shown. Some re-insurance transactions are excluded from the returns to avoid duplication.

The following tables show some details of revenue and expenses relating to general insurance for the years 1974-75 to 1977-78. The tables contain selected items of statistics and should not be combined and construed as profit and loss statements or revenue accounts.

The first table shows details of claims and other expenses. Claims include provision for outstanding claims and represent claims incurred during the year. Other expenses mainly represent payments made during the year.

**General Insurance: Expenses, South Australia**

Type of Expense	1974-75	1975-76	1976-77	1977-78
\$'000				
<b>Claims:</b>				
Fire and sprinkler leakage .....	15 701	7 957	5 429	4 781
Houseowners' and householders' ....	27 747	12 892	8 930	10 949
Loss of profits .....	1 894	798	83	62
Crop (including hailstone) .....	395	276	1 076	561
Marine .....	3 771	3 159	3 401	4 002
Motor vehicle;				
Compulsory third party .....	41 304	50 334	56 831	75 216
Comprehensive (including motor cycles) .....	31 391	32 477	34 395	37 592
Employers' liability and workers compensation .....	52 461	49 760	56 604	53 415
Personal accident .....	2 107	2 343	2 908	3 843
Public liability .....	2 065	2 648	2 320	2 549
Burglary .....	944	930	1 089	1 462
Boiler/engineering and machinery breakdown .....	494	637	1 408	720
All risks: Contractors' .....	1 714	1 059	404	747
Baggage .....	819	856	1 063	1 410
Other .....	1 941	2 385	2 349	3 467
Total claims .....	184 746	168 513	178 290	200 781
<b>Selected expenses:</b>				
Contributions to fire brigades .....	(a) 3 424	(a) 4 935	7 302	7 697
Commission and agent charges .....	14 016	14 142	15 592	15 922
Management .....	28 296	31 215	38 123	38 877
Taxation .....	2 379	2 065	1 536	1 297
Other underwriting expenses .....	(a) 1 364	(a) 1 280	421	1 338
Total expenses .....	234 225	222 150	241 264	265 912

(a) Includes Northern Territory.

The next table shows premiums earned by the companies. Premiums represent the full amount receivable in respect of policies issued and renewed in the year less returns,

rebates, and bonuses, paid or credited to policy holders in the year. They are not adjusted to provide for premiums unearned at the end of the year and consequently the amounts shown differ from 'earned premium income' for the year. Premiums have increased over the period covered by the table and hence have been greater than earned premium income in each year.

#### General Insurance: Revenue, South Australia

Source of Revenue	1974-75	1975-76	1976-77	1977-78
\$'000				
<b>Premiums:</b>				
Fire and sprinkler leakage .....	13 463	17 432	17 277	17 791
Houseowners' and householders' ....	12 322	16 379	18 344	20 653
Loss of profits .....	2 106	2 818	2 604	2 793
Crop (including hailstone) .....	1 242	1 144	1 009	606
Marine .....	3 933	4 244	5 125	5 529
<b>Motor vehicle;</b>				
Compulsory third party .....	33 902	43 357	49 256	60 476
Comprehensive (including motor cycles) .....	38 216	52 552	62 312	61 975
<b>Employers' liability and workers compensation</b> .....				
Personal accident .....	65 685	74 468	87 196	78 377
Public liability .....	4 890	5 530	6 316	8 118
Burglary .....	2 904	3 370	4 286	5 206
Boiler/engineering and machinery breakdown .....	1 279	1 605	1 972	2 418
All risks: Contractors' .....	605	572	819	835
Baggage .....	1 307	1 678	2 159	2 085
Other .....	4 205	5 034	7 013	7 528
Total premiums .....	187 316	231 649	267 639	276 540

#### Further References

Additional information may be found in the following publications:

##### South Australian Office

5603.4 *Private Finance*

##### Central Office

5620.0 *General Insurance*

5622.0 *Life Insurance*

## 12.3 OTHER PRIVATE FINANCE

### STOCK EXCHANGE OF ADELAIDE LIMITED

The Stock Exchange of Adelaide was formed in 1887 by the amalgamation of the Adelaide Stock Exchange and the Stock Exchange of South Australia. Basically the Exchange provides facilities for trading in securities, with transactions being conducted by brokers who act as agents for the investing public.

The Exchange operates under a set of rules which govern both the behaviour of companies, through the various listing requirements, and the conduct of members. Management is by a chairman, a vice-chairman and a committee of four, elected by the members.

Lists of quotations are issued by the Exchange twice daily and lists of dividends and new issues are produced weekly. Transfer marking and noting services are available to members of the Exchange and to the public through solicitors and accountants. A visitors gallery overlooking the trading floor enables the proceedings to be observed.

On 2 January 1972, the Member Exchanges of the Australian Associated Stock Exchanges (which includes Adelaide) adopted the policy of 'national listing'. This common listing meant that, at 30 June 1979, the Stock Exchange of Adelaide Limited had 1 110 companies on its Official List with a total equity market capitalisation (*i.e.* total market value of ordinary shares) of \$26 485 million. The face value of other listed securities at 30 June 1979 was Commonwealth Government loans \$16 090 million, public corporation loans \$2 332 million, debentures \$2 625 and unsecured notes \$162 million.

The figures in the following table have been supplied by the Stock Exchange.

It should be noted that several companies with diverse activities, including extensive oil and/or mining interests, are classified by stock exchanges as 'industrial' and are shown in that category in the table.

#### Stock Exchange of Adelaide, Recorded Turnover of Securities

Particulars	Year Ended 30 June				
	1975	1976	1977	1978	1979
TRANSACTIONS ('000)					
Shares, Commonwealth Government loans, public corporation loans, debentures and unsecured notes	32	35	38	41	50
NUMBER OF SHARES ('000)					
Shares:					
Industrial .....	14 767	19 521	21 274	27 454	30 263
Mining and oil .....	9 202	11 558	12 460	22 874	33 240
Total shares .....	23 969	31 079	33 734	50 328	63 503
MARKET VALUE (\$'000)					
Shares:					
Industrial .....	12 739	21 066	22 477	30 549	38 807
Mining and oil .....	4 354	7 674	9 350	10 569	18 290
Total shares .....	17 093	28 740	31 827	41 118	57 097
\$'000					
Commonwealth Government loans, public corporation loans, debentures and unsecured notes:					
Face value .....	2 340	2 224	1 959	2 377	<i>n.a.</i>
Market value .....	1 892	1 902	1 665	2 184	3 130

#### BUILDING SOCIETIES

The operations of building societies in South Australia are regulated by the Building

Societies Act, 1975-1976 which is administered by the Registrar of Building Societies with whom all building societies must be registered. The societies fall into two categories—permanent societies and terminating (Starr-Bowkett) societies.

Permanent societies are organisations which have rules or regulations that do not specify that they are to terminate on a specific date or when a specific object is achieved. They operate on a co-operative basis by borrowing predominantly from their members and providing finance to their members and other persons principally in the form of housing loans. Advances for the purpose of building or acquiring homes are made to members and other persons by way of mortgage. Two permanent building societies are approved organisations in which the trustee of an estate may legally invest funds. Detailed statistics on the operations generally of permanent building societies are available in the monthly bulletin *Permanent Building Societies Housing Finance for Owner Occupation* (Catalogue No. 5610.0) and the annual bulletin *Permanent Building Societies: Assets, Liabilities, Income and Expenditure* (Catalogue No. 5632.0).

The statistics below summarise information collected from the nine permanent building societies balancing within the 1977-78 and 1978-79 financial years.

#### Permanent Building Societies: Liabilities and Assets, South Australia<sup>(a)</sup>

Liabilities	1977-78	1978-79	Assets	1977-78	1978-79
\$'000					
Share capital and reserves:			Amount owing on loans .....	261 534	350 775
Withdrawable shares .....	314 579	414 335	Cash on hand .....	834	158
Reserves:			Deposits with:		
Statutory .....	—	—	Banks .....	42 273	26 261
Other (b) .....	3 560	6 156	Other .....	15 786	5 313
Deposits .....	10 372	12 280	Bills, bonds and other securities .....	16 218	54 909
Loans .....	18 480	20 704	Accounts receivable .....	743	1 958
Accounts payable .....	1 056	1 332	Physical assets .....	11 456	16 247
Other liabilities (c) .....	1 009	1 454	Other assets .....	212	640
Total liabilities .....	349 056	456 261	Total assets .....	349 056	456 261

(a) At the balance dates of societies within the financial year shown.

(b) Includes accumulated surplus, general, capital and other reserves.

#### Permanent Building Societies: Income and Expenditure, South Australia

Expenditure	1977-78	1978-79	Income	1977-78	1978-79
\$'000					
Interest on:			Interest from:		
Shares .....	23 867	32 591	Loans .....	24 695	33 405
Deposits .....	886	972	Deposits .....	5 334	3 563
Loans .....	852	926	Income from holdings of securities .....	1 353	5 213
Wages and salaries .....	2 906	3 768	Other income .....	1 650	1 922
Administrative expenses (a) .....	2 076	2 060	Total income .....	33 032	44 103
Other expenditure .....	1 317	2 828			
Total expenditure .....	31 904	43 145			

(a) Includes Permanent Building Society Association costs, advertising, bank charges and other administrative expenses.

Terminating (Starr-Bowkett) societies have a limited life and derive their funds from regular subscription from members. These funds are used to make interest-free advances to members, with priority being determined by ballot. There were fourteen terminating building societies operating in South Australia in 1977-78, and thirteen in 1978-79. The statistics which follow summarise information collected from these societies. More detailed description and dissection of these statistics may be found in the bulletin *Terminating Building Societies: Assets, Liabilities, Income and Expenditure* (Catalogue No. 5633.0).

**Terminating Building Societies: Liabilities and Assets, South Australia<sup>(a)</sup>**

Liabilities	1977-78	1978-79	Assets	1977-78	1978-79
\$'000					
Share capital (b) .....	1 915	1 588	Amount owing on loans (b) .....	1 931	1 655
Accumulated funds (c) .....	250	226	Cash on hand and current accounts at banks .....	104	116
Other liabilities .....	31	28	Deposits with:		
			Banks .....	153	63
			Others .....	4	5
			Physical assets .....	1	1
			Other assets .....	2	2
Total liabilities .....	2 195	1 842	Total assets .....	2 195	1 842

(a) At the balance dates of societies within the financial year shown.

(b) Borrowing members' subscriptions have been offset against 'Amount owing on loans'.

(c) Includes accumulated surpluses and deficits.

**Terminating Building Societies: Income and Expenditure, South Australia**

Expenditure	1977-78	1978-79	Income	1977-78	1978-79
\$'000					
Interest paid on borrowing members' subscriptions .....	—	—	Interest on:		
Interest on loans from:			Loans to members .....	—	—
Banks .....	—	—	Other .....	—	—
Other .....					
Salaries and secretarial fees .....	19	19	Management fees .....	22	17
Other expenditure .....	23	44	Other income .....	19	34
Total expenditure .....	42	63	Total income .....	42	51

**CO-OPERATIVE CREDIT SOCIETIES**

Co-operative credit societies are registered under the Credit Unions Act, 1976 which is administered by the Registrar of Credit Unions. Before 28 April 1977, when the Credit Unions Act, 1976 was proclaimed, these societies were registered under the Industrial and Provident Societies Act, 1923-1974.

The societies included in this collection, which began in 1970-71, are mainly credit unions or savings and loan societies. A credit union is defined as an organisation that:

(a) is registered under the Credit Unions Act, 1976; and

(b) operates on a co-operative basis by predominantly borrowing from and providing finance to its own members.

Details of assets and liabilities of these societies, given in the following table, are compiled from individual returns with a variety of balance dates. The figures are aggregates of returns submitted by societies for their relevant accounting periods closing on various dates during the financial years shown.

More detailed description and dissection of these statistics may be found in the annual bulletin *Credit Unions: Assets, Liabilities, Income and Expenditure* (Catalogue No. 5618.0).

**Co-operative Credit Societies, South Australia**

Particulars	1976-77	1977-78	1978-79
Number			
Societies .....	33	32	30
Shareholders .....	70 794	78 616	88 582

Co-operative Credit Societies, South Australia (*continued*)

Particulars	1976-77	1977-78	1978-79
\$'000			
<b>Income:</b>			
Interest on loans to members .....	7 522	9 594	12 859
Other .....	1 007	1 475	2 270
Total .....	8 529	11 069	15 129
<b>Expenditure:</b>			
Interest on deposits .....	4 851	6 572	9 358
Other (a) .....	3 156	3 748	4 699
Total .....	8 007	10 319	14 056
<b>Assets:</b>			
Loans to members .....	65 414	82 657	113 120
Cash in hand and at bank .....	924	3 343	1 665
Deposits with Credit Union Associations and Leagues .....	3 399	6 182	10 123
Investments .....	2 099	3 863	4 505
Other .....	2 145	2 362	4 407
Total .....	73 981	98 408	133 821
<b>Liabilities:</b>			
Share capital .....	668	699	790
Reserves and accumulated profits .....	317	867	2 350
Deposits .....	70 015	93 754	124 660
Budget savings accounts .....	569	608	674
Bank overdraft .....	1 826	1 972	4 331
Other borrowings (b) .....		508	1 014
Other .....			
Total .....	73 981	98 408	133 821

(a) Includes interest on loans, salaries and wages, administrative expenses, bad debts and provision for doubtful debts. (b) Includes loans from Credit Union Leagues or Associations.

## INSTALMENT CREDIT FOR RETAIL SALES

Instalment credit for retail sales is defined as covering all schemes under which repayment is made by regular predetermined instalments, such as time payment, budget accounts and certain personal loans. Credit schemes which do not involve repayment by regular predetermined instalments, lay-bys and all credit transactions related mainly to the financing of 'producer' type goods such as plant, machinery and motor vehicles normally used for commercial purposes are excluded from the following statistics. Also excluded are the financing of sales of land and buildings, property improvements, services such as repair work and travel facilities, and rental and leasing schemes.

Legislation controlling instalment credit schemes in South Australia is embodied in the Consumer Transactions Act, 1972-1973 and the Consumer Credit Act, 1972-1973, both effective from 1 November 1973. Since that date, it has not been possible to enter into a hire-purchase agreement in South Australia.

The Consumer Transactions Act repealed the Hire-Purchase Agreements Act, 1960-1971 and originated 'consumer contracts', 'consumer credit contracts' and 'consumer

mortgages'. Generally consumer contracts and consumer credit contracts refer to the purchase by an individual of goods or services, where their price and the principal amount of credit extended does not exceed \$10 000. Under a consumer mortgage the consumer becomes the owner of the goods when they are delivered to him and the credit provider holds a mortgage over the goods as security for the amount payable. Hence goods may still be repossessed if the consumer breaches certain conditions of the agreement. However, subject to the conditions stipulated in the Act, the consumer may return the goods and rescind the consumer mortgage at any time.

The Consumer Credit Act repealed the Money-lenders Act and established a Credit Tribunal to which, in certain circumstances, consumers may apply for relief from the terms of a contract. The Tribunal also acts as licensing authority for those persons and corporations deemed to be credit providers under the Act and controls the conditions of operation of 'revolving charge accounts'. Information to be included in a credit contract, including the credit charge, is specified in detail by the Act.

Details of instalment credit provided by businesses (other than banks, credit unions and insurance companies) during the years 1976-77 to 1978-79 are given in the following tables. In each of these tables the motor vehicle group includes new and used motor cars, motor cycles, caravans, motor parts and accessories. Included in household and personal goods are furniture and furnishings, domestic refrigerators, electrical goods, musical instruments, bicycles, and other household and personal goods.

#### Instalment Credit for Retail Sales, South Australia<sup>(a)</sup>

Year	Amount Financed (b)						Balances Outstanding at End of Period (d) (e)			
	Motor Vehicles, etc. (c)		Household and Personal Goods		Total					
	Finance Companies	Other Businesses	Finance Companies	Other Businesses	Finance Companies	Other Businesses				
\$ million										
1976-77 .....	128.9	0.4	14.5	39.4	143.4	39.8	259.2	28.7		
1977-78 .....	113.7	0.2	14.8	36.4	128.5	36.6	263.3	27.7		
1978-79 .....	108.2	0.2	15.3	32.3	123.5	32.5	253.8	26.2		

(a) Before 1978-79 the figures relate only to finance companies or other businesses which individually or as a group of related finance companies or other businesses respectively had balances outstanding on an Australia-wide basis of \$500 000 or more on all types of finance agreements. From 1978-79 the statistics of finance companies relate only to finance companies with equivalent balances outstanding of \$5 million or more.

(b) Excludes hiring charges, interest and insurance.

(c) Excludes motor vehicles normally used for commercial purposes.

(d) Includes hiring charges, interest and insurance.

(e) Includes Northern Territory.

#### Instalment Credit for Retail Sales, Motor Vehicles Etc., South Australia<sup>(a)</sup>

Year	Cars and Station Wagons				Other Amount Financed (b)			
	Number Financed		Amount Financed (b)					
	New	Used	New	Used				
'000								
1976-77 .....	11.0	26.2	43.9	66.9	18.6			
1977-78 .....	7.4	24.0	33.4	66.6	13.9			
1978-79 .....	6.3	21.8	29.8	66.9	11.8			

(a) Refer footnote (a) of previous table. (b) Excludes hiring charges, interest and insurance.

## FINANCE COMPANIES

In the following tables a finance company is defined as an incorporated company mainly engaged in providing to the general public (businesses as well as persons in their private capacity) credit facilities of the following types: instalment credit for retail sales, personal loans, wholesale finance, factoring, other consumer and commercial loans, financial leasing of business plant and equipment and bills of exchange. A company is mainly engaged in providing these credit facilities if 50 per cent or more of its assets consist of balances outstanding with respect to these types of financing, or if 50 per cent or more of its income is derived from such types of financing. Special classes of financial institutions such as unincorporated businesses, banks, life and general insurance companies, authorised dealers in the short-term money market, pastoral finance companies, investment companies, unit trusts, land trusts, mutual funds and management companies for such trusts and funds. Pensioner and superannuation funds, building societies and friendly societies and credit unions are excluded. Money market corporations (merchant banks) also have been excluded from October 1978.

Comprehensive information on the transactions of finance companies is available in the monthly bulletin *Finance Companies, Australia* (Catalogue No. 5614.0).

Finance Companies: Summary, South Australia

Particulars	1976-77	1977-78	1978-79(a)
Amount financed (b) .....	891.2	832.5	820.4
Collections and other liquidations (c) .....	938.7	1 048.8	1 100.1
Balances outstanding at end of period (c) .....	930.6	969.6	936.2
Leasing of business plant and equipment (b):			
Value of goods newly leased during period (d) (e) .....	119.5	148.0	167.2
Value of all leasing agreements at end of period (c) (f) .....	235.6	317.8	405.0

(a) Before 1978-79 the statistics relate only to finance companies which individually or as a group of related finance companies had balances outstanding on an Australia-wide basis of \$500 000 or more in the prescribed types of financial agreements. From 1978-79 the statistics relate only to finance companies with equivalent balances outstanding of \$5 million or more.

(b) Excludes amount financed for wholesale finance and personal loans in Northern Territory.

(c) Includes Northern Territory.

(d) Initial capital cost.

(e) Includes Northern Territory to June 1978.

(f) Basis of valuation is 'gross receivable.'

Finance agreements may be classified according to the purpose of the loan. The comments below are offered to clarify the content of various items in the table which follows:

- (1) instalment credit for retail sales is defined in the same way as in the previous section (see pages 581-2);
- (2) personal loans include all loans to persons in their private capacity, other than loans classified as instalment credit or finance for housing and includes loans to persons for alterations or additions, estimated to cost less than \$10 000 to existing dwelling units;
- (3) wholesale finance relates mainly to the financing of motor vehicle dealers stocks held under bailment or floor-plan schemes but includes also financing of other trading stock and the factoring of trade debts;

(4) finance for housing includes finance for houses, flats, home units and other dwelling units (excluding hotels, hostels, etc.), loans to persons for alterations or additions, estimated to cost \$10 000 or more to existing dwelling units, and finance for the purchase of residential blocks of land;

(5) other commercial loans include loans for the purpose of developing a tract of land into residential blocks, construction other than housing and financing of sales of 'producer' type goods.

The following table shows amount financed and balances outstanding classified according to the purpose of the loan for the years 1976-77 to 1978-79.

**Finance Companies: Amount Financed and Balances Outstanding Classified by Type of Finance Agreement, South Australia**

Particulars	1976-77	1977-78	1978-79(a)
\$ million			
<b>Amount financed during year:</b>			
Instalment credit for retail sales and personal loans (b)	195.9	186.6	179.3
Finance for housing .....	205.6	140.2	89.5
Wholesale finance (c) (d) .....	434.4	448.0	487.7
Other commercial loans .....	77.6	81.8	101.1
Leasing of business plant and equipment (e) (f) .....	119.5	148.0	167.2
Total amount financed (g) .....	1 010.7	980.5	987.6
<b>Balances outstanding at 30 June (c):</b>			
Instalment credit for retail sales and personal loans ....	343.9	358.3	343.8
Finance for housing .....	345.3	330.3	285.6
Wholesale finance .....	87.3	94.1	113.0
Other commercial loans .....	154.0	186.8	193.8
Leasing of business plant and equipment (h) .....	235.6	317.8	405.0
Total balances outstanding .....	1 166.2	1 287.4	1 341.2

(a) Refer footnote (a) of previous table.

(b) Personal loans include Northern Territory.

(c) Includes Northern Territory.

(d) Includes factoring of trade debts.

(e) Initial capital cost.

(f) Includes Northern Territory to June 1978.

(g) Excludes amount financed for wholesale finance and personal loans in Northern Territory.

(h) Basis of valuation in 'gross receivables'.

### FINANCIAL CORPORATIONS ACT

The *Financial Corporations Act* 1974 enables the Reserve Bank to examine and regulate the business activities of non-bank financial intermediaries (finance companies, building societies, credit unions, etc.) and large retailers which finance their sales by instalment credit schemes.

In order to perform its monitoring and control function, the Reserve Bank is empowered by the Act to collect monthly information from each of the larger financial corporations (assets in excess of \$5 million) and from the larger retailers (balances outstanding in excess of \$5 million on instalment credit for retail sales agreements). Other financial corporations with total assets in excess of \$1 million are also required to submit information at less frequent intervals.

## HOUSING FINANCE FOR OWNER OCCUPATION

A monthly statistical series was introduced in October 1975 to provide information on finance (secured by mortgage or other security, including secured personal loans and contracts of sale) approved by significant lenders to individuals for the construction or purchase of dwellings for owner occupation. Also included is housing finance provided to employees by lenders covered in the collection.

The types of lenders included in these statistics are trading and savings banks, permanent and terminating (Starr-Bowkett) building societies, finance companies, government housing authorities and other government departments, insurance companies and credit unions. A lender is significant if over a financial year it approves loans to individuals for housing finance for owner occupation in excess of \$250 000 or if at the end of a financial year it has balances outstanding on such loans exceeding \$2 million.

*Purchase of newly erected dwellings* represents the purchase of dwellings which have been completed or will be completed within a period of twelve months preceding the date of purchase and where the purchaser is, or will be, the first occupant.

*Purchase of established dwellings* represents the purchase of dwellings which have been completed for a period of greater than twelve months preceding the date of purchase or, if completed within twelve months, where the purchaser is not the original occupant.

The term *dwelling* includes houses and other dwellings where the latter is defined as a self-contained dwelling unit other than a house. (Examples of *other dwellings* are flats, home units, semi-detached cottages, villa units and town houses.)

The term *number of dwelling units* refers to the number of houses and other dwellings for which loans secured by contract of sale or first mortgage only have been approved.

Comprehensive statistics on housing finance for owner occupation are available in the monthly bulletin *Housing Finance for Owner Occupation* (Catalogue No. 5609.0).

## Housing Finance for Owner Occupation, South Australia

Period	Loans Approved for		Cancellations of Loans Previously Approved	Loans Advanced (a)	Loans Approved but not Advanced (a)
	Construction or Purchase of Dwellings	Alterations and Additions			
1976-77 .....	525 249	26 021	\$'000 21 640	424 668	74 160
1977-78 .....	537 986	27 817	23 691	435 325	68 779
1978-79 .....	572 077	32 057	23 051	464 112	69 730

(a) Excludes trading banks.

## Housing Finance for Owner Occupation: Number of Dwelling Units for which Loans were Approved to Individuals by Type of Lender, South Australia

Period	Banks		Permanent Building Societies(a)	Finance Companies	Government n.e.i.	Other	Total
	Savings	Trading					
CONSTRUCTION OF DWELLINGS							
1976-77 .....	1 594	1 137	198	879	104	839	4 751
1977-78 .....	1 566	891	253	558	80	550	3 898
1978-79 .....	1 599	826	323	364	56	361	3 529
PURCHASE OF NEWLY ERECTED DWELLINGS							
1976-77 .....	1 869	2 410	550	343	450	613	6 235
1977-78 .....	1 732	2 538	717	301	651	418	6 357
1978-79 .....	1 382	1 900	348	207	422	465	4 724

**Housing Finance for Owner Occupation: Number of Dwelling Units for which Loans were Approved to Individuals by Type of Lender, South Australia (continued)**

Period	Banks		Permanent Building Societies(a)	Finance Companies	Government n.e.i.	Other	Total
	Savings	Trading					
PURCHASE OF ESTABLISHED DWELLINGS							
1976-77 .....	6 833	2 313	2 233	934	342	461	13 116
1977-78 .....	7 019	2 048	2 934	706	585	403	13 695
1978-79 .....	7 896	2 161	4 009	623	562	674	15 925
TOTAL							
1976-77 .....	10 296	5 860	2 981	2 156	896	1 913	24 102
1977-78 .....	10 317	5 477	3 904	1 565	1 316	1 371	23 950
1978-79 .....	10 877	4 887	4 680	1 194	1 040	1 500	24 178

(a) Includes terminating (Starr-Bowkett) societies.

**Housing Finance for Owner Occupation: Value of Loans Approved to Individuals by Type of Lender, South Australia**

Period	Banks		Permanent Building Societies(a)	Finance Companies	Government n.e.i.	Other	Total
	Savings	Trading					
CONSTRUCTION OF DWELLINGS \$'000							
1976-77 .....	33 616	20 210	5 594	30 785	1 887	18 089	110 181
1977-78 .....	35 156	15 965	7 954	19 652	1 294	12 471	92 492
1978-79 .....	38 232	19 522	9 558	13 524	948	8 097	89 881
PURCHASE OF NEWLY ERECTED DWELLINGS \$'000							
1976-77 .....	37 891	38 968	13 577	29 433	11 585	13 077	144 531
1977-78 .....	37 796	47 785	19 526	17 660	18 402	8 870	150 039
1978-79 .....	31 343	42 983	10 329	6 978	13 224	11 679	116 536
PURCHASE OF ESTABLISHED DWELLINGS \$'000							
1976-77 .....	128 714	36 665	54 517	34 509	5 440	10 692	270 537
1977-78 .....	139 131	36 184	71 988	28 349	10 072	9 731	295 455
1978-79 .....	170 112	40 515	103 442	23 990	14 765	12 836	365 660
TOTAL \$'000							
1976-77 .....	200 221	95 843	73 688	94 727	18 912	41 858	525 249
1977-78 .....	212 083	99 934	99 468	65 661	29 768	31 072	537 986
1978-79 .....	239 687	103 020	123 329	44 492	28 937	32 612	572 077

(a) Includes terminating (Starr-Bowkett) societies.

### Further References

Additional information may be found in the following publications:

#### South Australian Office

##### 5603.4 Private Finance

#### Central Office

##### 5609.0 Housing Finance for Owner Occupation

##### 5614.0 Finance Companies, Australia

##### 5618.0 Credit Unions: Assets, Liabilities, Income and Expenditure

##### 5631.0 Instalment Credit for Rental Sales

##### 5632.0 Permanent Building Societies: Assets, Liabilities, Income and Expenditure

## PART 13

# REGIONAL STUDIES

## MURRAY LANDS

The region covered by this study is defined as the Murray Lands Statistical Division. It consists of two Subdivisions, Riverland in the north and Murray Mallee in the south. The location and boundaries of the Murray Lands Statistical Division are shown on the map on page 588.

Murray Lands is the State's most important horticultural area, the main products being grapes, citrus and stone fruits. It is a popular tourist area and the River Murray, in addition to supplementing water supplies and providing water for irrigation, is used for recreational purposes.

Murray Lands comprises municipalities of the towns of Renmark and Monarto and district councils of Barmera, Berri, Browns Well, Coonalpyn Downs, Karoonda-East Murray, Lameroo, Loxton, Mannum, Meningie, Morgan, Murray Bridge, Paringa, Peake, Pinnaroo, Ridley, Truro and Waikerie. It occupies an area of 47 359 square kilometres.

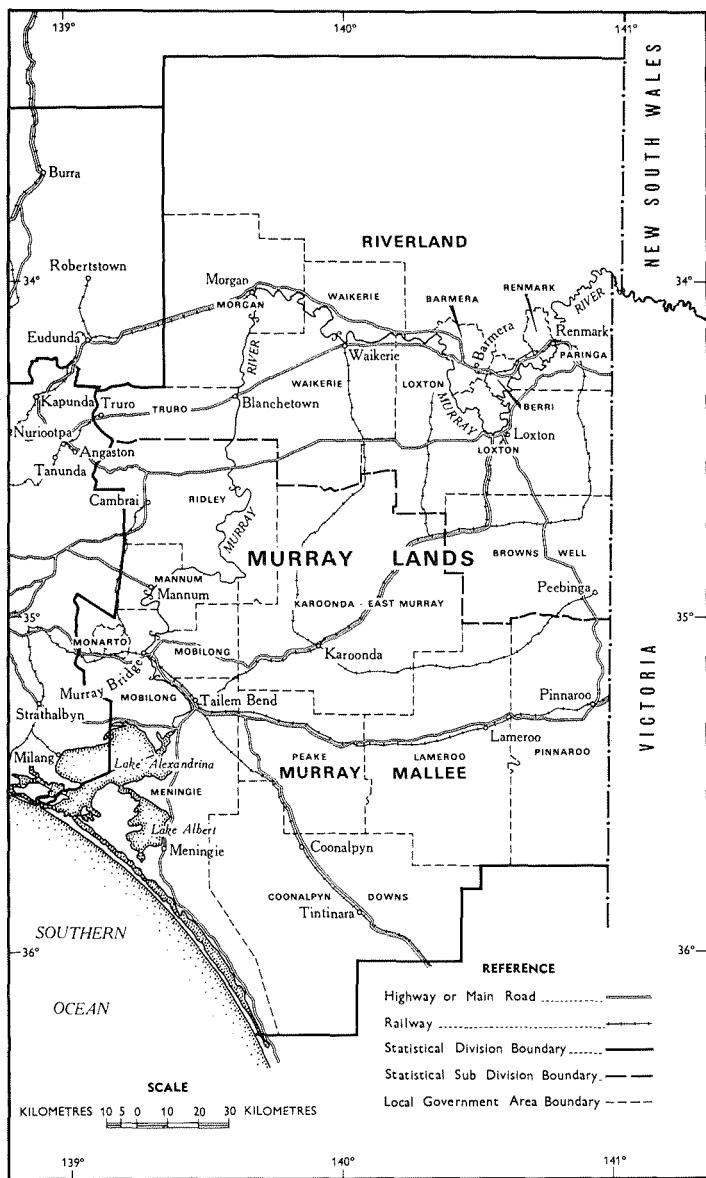
At 30 June 1979 the estimated population of Murray Lands was 62 250 persons.

### Physical Features

The area is generally flat to undulating, apart from the western portion of the Truro District Council which includes parts of the foothills of the Mount Lofty Ranges.

The main topographical feature of Murray Lands is the River Murray which enters the region from Victoria and flows into Lake Alexandrina. Between the Victorian border and Overland Corner the river has created a valley 30 to 40 metres in depth and averaging 10

# MURRAY LANDS STATISTICAL DIVISION AND SUBDIVISIONS



kilometres in width. Between Overland Corner and Mannum there is a low gorge averaging one and a half kilometres in width where the river has cut through marine limestone deposits. This gives way to a wider flood plain in the lower reaches between Murray Bridge and Wellington.

Barrages built across the southern part of Lake Alexandrina and the river at Goolwa, prevent entry of sea water so that Lakes Alexandrina and Albert are freshwater.

The area north-west of the Tailem Bend to Pinnaroo road contains numerous east-west oriented red dunes of aeolian origin. The beach dune ridge system extends from the lower South East into the southern portion of the region.

The Coorong Lagoon and Younghusband Peninsula form the entire coastline of the region and are the most recent of the sand dune and lagoon formations. Younghusband Peninsula separates the Coorong from the ocean and comprises a continuous ridge of sand dunes up to two kilometres wide and 50 metres high.

### Climate and Meteorology

The climate of the Murray Lands region ranges from arid in the area north of the Murray River to temperate about the area adjacent to the Mount Lofty Ranges and south of a line extending from Wellington to Keith. The climate of the area between these two extremes can be classified as semi-arid.

#### Rainfall

Annual average rainfall decreases with increasing distance from the coast from a maximum of more than 500 millimetres in the south to less than 250 millimetres in the far north of the region. Annual averages of about 500 millimetres are also recorded in parts of the western borders of the region which extend into the Mount Lofty and Flinders Ranges. However, the influence of these ranges does not extend far into the region.

Most of the region has a winter rainfall maximum which is particularly pronounced in the southern parts. The arid area to the north of the Riverland has a uniform distribution of rainfall throughout the year. Monthly and annual average rainfall totals for selected stations, together with average number of days of rain are shown in the following table.

Average Rainfall and Days of Rain: Selected Stations, Murray Lands

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
AVERAGE RAINFALL (MILLIMETRES)													
Caliph .....	22	21	15	23	30	26	28	30	25	32	22	20	294
Coonalpyn .....	21	20	21	37	50	53	54	55	48	44	30	25	458
Kypruna .....	23	23	11	30	23	17	20	24	23	22	22	19	257
Karoonda .....	17	22	16	25	38	33	34	38	35	34	23	23	338
Koomooloo .....	14	16	10	14	21	21	16	20	22	18	18	22	212
Lameroo .....	20	24	19	28	43	40	41	43	43	39	26	24	390
Loxton .....	18	23	16	17	27	27	26	28	28	28	21	19	278
Meningie .....	19	18	22	38	56	61	61	55	49	39	28	23	469
Meribah .....	17	20	14	22	29	26	30	25	29	30	21	17	280
Murray Bridge .....	17	20	20	29	36	36	34	35	36	34	25	22	344
Peake .....	17	24	21	29	44	41	42	46	42	39	25	25	395
Renmark .....	16	20	15	19	26	25	22	25	28	28	22	18	264
Sedan .....	16	19	16	22	32	34	31	35	32	30	18	18	303
Tintinara .....	19	22	22	38	55	52	54	57	51	45	32	27	474
Waikerie .....	16	23	12	17	23	26	20	23	24	26	20	20	250
Woods Well .....	18	22	22	42	73	55	70	62	49	45	35	30	523
AVERAGE NUMBER OF DAYS OF RAIN													
Caliph .....	3	2	4	5	7	6	7	10	7	7	4	3	65
Coonalpyn .....	3	3	4	7	11	12	11	12	11	9	6	5	94
Kypruna .....	3	2	2	4	4	4	6	5	5	4	3	2	44
Karoonda .....	4	2	4	7	9	9	13	13	11	10	6	4	92
Koomooloo .....	2	1	2	3	7	5	7	6	5	4	3	3	48
Lameroo .....	4	4	4	7	11	12	13	14	11	9	6	5	100
Loxton .....	3	3	3	4	7	8	9	10	7	6	5	4	69

**Average Rainfall and Days of Rain: Selected Stations, Murray Lands (continued)**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
	AVERAGE NUMBER OF DAYS OF RAIN												
Meningie .....	4	4	6	9	13	14	15	15	14	10	7	6	117
Meribah .....	3	2	2	4	7	6	8	8	7	6	4	2	59
Murray Bridge .....	4	4	4	7	10	11	12	12	10	11	6	5	94
Peake .....	3	3	3	6	12	10	14	15	11	11	6	5	99
Renmark .....	3	3	3	4	6	8	8	8	7	6	4	3	63
Sedan .....	3	3	3	5	7	8	9	10	8	7	4	4	71
Tintinara .....	3	3	4	7	11	11	13	14	12	9	6	5	98
Waikerie .....	2	3	3	4	6	7	8	8	6	5	4	3	59
Woods Well .....	4	3	3	6	14	13	16	16	12	9	7	8	111

In the Murray Mallee, the rainfall received during the period November to March is normally too low to be of any benefit for agricultural purposes. The growing season generally extends from May to September, but is slightly longer in the south and west of this district. The agricultural growing season in the Riverland extends from May to August in the south, but is generally extremely limited north of the Murray.

**Temperature**

Average maximum and minimum temperatures recorded at Renmark, Waikerie, Lameroo, Tailem Bend and Meningie are shown in the following table.

**Average Temperatures at Selected Stations, Murray Lands**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
	MAXIMUM TEMPERATURE (° CELSIUS)												
Lameroo .....	30.7	30.2	27.5	22.6	18.3	15.4	14.8	16.2	19.2	22.3	25.8	28.8	22.6
Meningie .....	26.0	26.6	24.2	21.7	18.0	15.3	15.0	15.8	17.2	20.3	22.2	24.4	20.5
Renmark .....	32.4	31.8	28.7	24.1	19.3	16.8	16.1	17.7	20.4	24.3	27.5	30.1	24.1
Tailem Bend .....	29.6	28.7	26.9	23.1	19.0	16.4	15.6	16.7	19.7	22.5	24.7	27.2	22.3
Waikerie .....	32.6	31.7	29.2	24.4	19.7	17.2	16.4	17.9	20.7	24.2	27.8	29.2	24.2
	MINIMUM TEMPERATURE (° CELSIUS)												
Lameroo .....	13.0	13.2	11.2	8.7	6.7	4.9	4.1	4.4	5.7	7.5	9.6	11.8	8.4
Meningie .....	13.4	13.8	12.5	11.1	8.5	6.7	6.8	7.0	7.7	9.1	10.7	12.5	10.0
Renmark .....	16.8	16.6	14.3	10.9	8.0	5.8	5.0	6.0	8.0	10.7	13.0	15.1	10.9
Tailem Bend .....	13.8	13.8	12.3	10.1	8.2	6.1	5.5	6.0	7.2	8.9	10.6	12.4	9.5
Waikerie .....	15.1	14.9	13.4	10.3	7.8	5.8	5.1	5.8	7.4	10.0	11.6	13.5	10.1

Average daily maximum temperatures range from 25°C to 33°C in the summer with the highest temperatures being recorded in northern parts of the region. Extreme maximum temperatures of over 46°C have been recorded in several centres. During winter average maximum temperatures range from 15°C to 17°C.

Mean daily minimum temperatures range from 13°C to 17°C in summer and from 4°C to 6°C in winter. Extreme minimum temperatures of less than minus 4°C have been recorded.

**Frosts**

Light frosts are often experienced between April and October in most parts of the region. However, heavy frosts are generally confined to the period between May and September.

**Winds**

In summer the prevailing wind direction at 9 a.m. is from south-east to south turning more south-westerly by 3 p.m.

During winter the prevailing wind direction is north to north-westerly at 9 a.m. turning more south-westerly during the afternoon.

A strong south-west to south seabreeze is a major feature of the wind regime over the region during the summer months. The sea breeze occasionally reaches as far north as the Riverland during hot spells.

#### *Evaporation*

Annual evaporation as recorded by a Class A Pan fitted with a birdguard ranges from about 1 500 millimetres near the coast to more than 2 000 millimetres inland.

Monthly totals range from between 210 to 330 millimetres in January to about 50 millimetres in July.

#### **Soils**

The extensive inland plain in this region is covered mainly by well-drained soils of medium to coarse texture. The profiles have abundant calcium carbonate in subsoils and are classed as solonised brown soils. The loamy types are predominantly red-brown in colour at the surface, in which case they may be relatively shallow above concretionary limestone (calcrete) as innumerable spherical concretions or dense layer of stone. Grey-brown loamy types are generally much more calcareous at the surface.

Deep sandy soils occur widely in the eastern and south-western parts. Most types in the north are solonised brown soils, while those in the south include a large extent of non-calcareous, neutral to slightly acid sands and a narrow coastal strip of sands largely consisting of shell fragments. All these occur principally on dunes, which include the sub-parallel sandridges on the loamy plains in the north and the steep-sided closely packed dunes in zones where loamy soils and limestone are scarce. Two such zones lie in the southern half of the area.

Along the irregular part of the western boundary there is a change from the solonised brown soils on the lower plains to the red-brown earths of the high plains and the podzolic soils and shallow stony types on foothills of the Mount Lofty Ranges. Another portion with distinctive soil cover represented nowhere else in the region is the sub-coastal zone extending 60 kilometres inland. This includes the strip of calcareous shelly sands, followed by ranges of hills with both red-brown or grey-brown soils thinly covering calcrete and banks of deep siliceous sands. This zone also includes several sand-free flats with various types of clay soils, commonly quite saline.

The soils most intimately associated with the River Murray are the low lying grey clays of the river flats upstream from Overland Corner, and the swamp soils in the entrenched section downstream from that point. Reclaimed swamp soils in this tract are dominated by organic matter and clay; peat is often present as a buried layer.

Serious problems of land use connected with irrigated orchards, vineyards, and pastures, or the development of agriculture on infertile soils in the south, led to some detailed soil studies and several reports with soil maps have been published.

Several features of soils in the Murray Lands have wide significance. They include stoniness, wind erosion hazards, salinity, trace element deficiencies, and water repellence.

Prevalence of shallow stony soils is a feature of the western half. Much of the land there has never been cultivated because of the very thin layer of earthy material over a thick bed of calcrete. In places where the calcrete is more fragmentary and the rainfall is sufficient for cropping, stony soils have been made arable with the help of stone rakes.

The sandy soils have certain advantages for cultivation and their clearing was helped by the rather scanty cover of native vegetation. Wind erosion of these soils is almost inevitable once the soil becomes bare. This frequently happens with cereal-growing. Many sandridges in the agricultural areas show evidence of serious movement of soil by the strong winds common in the region.

Concentrations of readily soluble salts are a natural feature of subsoils in this region, except for deep sands. This salinity is generally not serious enough to deter dryland farming, but it is a major hazard for irrigated farming. Fruit production under irrigation now relies heavily on drainage works to control salinity. Small areas of highly saline land occur in the north, between Berri and the State boundary, and in the south, between Tintinara and Salt Creek.

Soil deficiencies of trace elements have retarded plant and animal production in several parts of the Murray Lands, especially Coonalpyn Downs in the subcoastal zone. Four elements are involved: copper, cobalt, manganese, and zinc. Techniques have been developed to cope with these deficiencies.

Water repellence is a condition associated with the most sandy soils. It was first recognised in this region near Tintinara after some years of pasture growth on deep sands. Water penetration may be reduced to the point where water fails to soak into the ground, apparently because the soil pores normally open to movement of air and water have become blocked by organic materials, probably of fungal origin. Periodical cultivation is the only reliable way of dealing with this complaint.

#### Vegetation

In the northern parts of the region, low open woodland with black oak (*Casuarina cristata*) as the dominant species is common. Understorey is mainly chenopods, with blue-bush (*Kochia sedifolia*), various bassias and grasses. Black oak woodland intergrades with false sandalwood (*Myoporum platycarpum*) country in the north-west of the region and with mallee-broombush vegetation in the north-east pastoral lands.

Savannah woodland occurs in the eastern foothills of the Mount Lofty Ranges. Large eucalyptus and sheoaks dominate an understorey of annual and perennial grasses.

On the alluvial silts and clays deposited in the trench of the River Murray, river red gum (*Eucalyptus camaldulensis*) dominates an open woodland. Lignum (*Muehlenbeckia cunninghamii*) commonly forms a dense understorey on levees and flats of heavy grey clay. River box (*Eucalyptus largiflorens*) is a fairly common tree on flats subject to occasional flooding. The introduced willow (*Salix babylonica*) is particularly dominant along some reaches of the river.

In the central and eastern parts of the region the greater part of the original vegetation comprises mallee-broombush, heath and tea-tree (*Leptospermum* spp.). Mallee box (*Eucalyptus porosa*) with native pine (*Callitris* spp.) occurs in the Tailem Bend-Moorlands area on limestone soils. In the drier parts of the region mallee-broombush vegetation is replaced by a more open scrub in which sclerophyllous understorey plants are less common.

In the southern parts of the region a higher rainfall and deeper soils support a dense cover of mallee heath.

#### Wildlife

In common with other areas of the State, the extensive clearing of native vegetation for farming and pastoral activities and the introduction of foreign predators such as the fox and feral cat depleted the number of species in many localities within the region. Wildlife has survived in large numbers in remote uncleared areas north of Dukes Highway, along the Coorong and other areas which have been established as conservation parks.

The western grey kangaroo (*Macropus fuliginosus*) and emu (*Dromaius Novaehollandiae*) are quite common throughout the region. Other mammals which are considered abundant, especially in the southern part of the region, include the common wombat

(*Phascolomys mitchelli*), echidna, red-necked wallaby (*Wallabia rufogriseus*), and hairy-nosed wombat (*Lasiorhinus latifrons*).

The region supports numerous species of birdlife including some rare species such as the striated grass wren (*Amytornis striatus*) and mallee whip-bird (*Phosphodes nigrogularis*). The uncleared areas of mallee scrubland provide an important habitat for the mallee fowl (*Leipoa ocellata*).

The undisturbed stretches of the River Murray provide breeding grounds for prolific birdlife including swans and waterfowl.

The shores of Lakes Alexandrina and Albert are important refuges for Cape Barren geese (*Cereopsis Novaehollandiae*) and many species of waterfowl.

The Coorong is a breeding ground for rare coastal birdlife and a drought refuge for many species of water birds including waterfowl such as grey teal (*Anas gibberifrons*), chestnut teal (*Anas castanea*), mountain duck (*Tadorna tadornoides*) and black swan (*Cygnus atratus*). Five species of cormorants that occur in South Australia are found within the Coorong and some breed there. The Coorong is also a major breeding ground for the Australian pelican (*Pelecanus conspicillatus*) a fully protected bird. Thousands of pelicans gather on some islands of the Coorong during the breeding season. To protect the breeding grounds, entry to these islands is restricted.

### History

In 1830 Charles Sturt led an expedition from New South Wales to find out whether the River Murrumbidgee joined the newly discovered River Darling or whether it emptied itself into the sea. Governor Darling considered that conflow would inevitably form a major river which could possibly pass through fertile country inducing extensive settlement of those parts and which might also provide means of opening a direct and perhaps an easy communication between New South Wales and areas which later became South Australia.

Rowing down the Murrumbidgee in a 7.6 metre whaleboat, Sturt and his companions discovered a large river which Sturt named the Murray and travelling downstream they eventually reached the mouth of the river. It was not until some years later that navigation of the river by larger craft was attempted.

The first overland route between New South Wales and South Australia was established in 1838 by Joseph Hawdon and Charles Bonney who drove cattle from Hawdon's station near Albury along the northern bank of the River Murray through virtually unknown country. During this trip Hawdon discovered a large freshwater lake and named it Lake Bonney. Only a few years later squatters were granted occupation licences over land in the vicinity of Lake Bonney and John Chambers, one of the original squatters, held leases in 1857 over 120 000 hectares of land.

The overland route established by Hawdon and Bonney was used each year to drive cattle and sheep to Adelaide. Overland Corner became an important camping place for drovers. When gold was discovered in New South Wales and Victoria in 1851 many people from Adelaide followed this route on their way to the gold fields.

The significance of the River Murray as a transport route became evident in 1853 when Captain Francis Cadell won a prize offered by the South Australian Government to the first steamship to have navigated the River Murray from Goolwa to New South Wales. He took his paddle steamer 'Lady Augusta' past Swan Hill and narrowly defeated the paddle steamer 'Mary Ann', built by W. Randell at Mannum, which proceeded with its load of flour to Echuca.

In time, the River Murray became an important trade route with paddle steamers, often towing barges, carrying stores upriver and loading bales of wool from the stations along the Darling and Murrumbidgee on the return trip. Because of the difficulty in

negotiating the Murray mouth, a public railway was built in 1854 between Goolwa and Port Elliott so that wool and other produce could be loaded on ships for overseas.

With the growth of railways the importance of the River Murray as a transport artery gradually diminished and early this century ceased.

From the 1880s several irrigation schemes were attempted in the upper reaches of the River Murray with various measures of success. The most notable of these was that initiated by the two Chaffey brothers at a location which was to become the town of Renmark. Other irrigation localities such as Berri, Barmera and Waikerie became important townships on the river.

The first irrigation development in South Australia occurred in 1881 near Wellington when Sir W. F. D. Jervois, then Governor of the State, reclaimed approximately 1 340 hectares of swamp land. By 1929 most of the swamp areas between Mannum and Wellington had been reclaimed and settled.

The bridge across the River Murray near Swanport had been opened for road traffic in 1879 and to railway traffic in 1886. The town of Murray Bridge developed at the crossing.

In 1886 a rail link between Adelaide and Melbourne via Nairne, Murray Bridge and Bordertown was opened. The mallee lands east of the river which had been virtually unoccupied became more accessible and farmers selected the more attractive land along the railway. The taking-up and clearing of land in the Murray Mallee was stimulated by the new system of tenure which enabled individuals to lease the land with the right of purchase from the Government or to secure land on perpetual lease.

Until the 1939-45 War, the southern and eastern parts of the region were sparsely populated largely because some areas were found to be infertile. This pattern of very limited land use changed dramatically when previously unproductive areas were successfully developed as pastures with the addition of trace elements and fertilisers.

### Population

Murray Lands population at 30 June 1979 was estimated at 62 250 representing 4.93 per cent of the State population. The population is divided evenly numerically between those living in towns with 200 or more occupants and those living on rural properties.

The following table shows population figures since 1966 for Murray Lands and South Australia.

**Population, Murray Lands and South Australia**

Area	At 30 June			
	1966	1971 (a)	1976 (a)	1979
Barmera (DC) .....	3 546	3 650	3 900	4 050
Berri (DC) .....	5 041	5 250	5 600	6 050
Browns Well (DC) .....	622	550	400	400
Coonalpyn Downs (DC) .....	2 000	2 150	1 900	1 850
Karoonda-East Murray (DC) (b) .....	2 129	1 850	1 800	1 800
Lameroo (DC) .....	1 947	1 700	1 700	1 700
Loxton (DC) .....	6 321	6 250	6 400	6 550
Mannum (DC) .....	3 055	3 050	3 100	3 050
Meningie (DC) .....	4 137	4 200	4 300	4 400
Monarto (M) (c) .....	..	300	250	250
Morgan (DC) .....	1 192	1 200	1 200	1 250
Murray Bridge (DC) (d) .....	9 827	10 600	12 500	13 350
Paringa (DC) .....	1 270	1 250	1 350	1 400
Peake (DC) .....	1 182	1 050	1 000	950
Pinnaroo (DC) .....	1 717	1 600	1 500	1 500
Renmark (M) .....	6 275	6 400	6 350	6 400
Ridley (DC) (e) .....	1 847	1 850	1 750	1 900
Truro (DC) .....	588	500	550	600

**Population, Murray Lands and South Australia (continued)**

Area	At 30 June			
	1966	1971 (a)	1976 (a)	1979
Waikerie (DC) .....	3 833	4 000	4 500	4 650
Unincorporated .....	169	250	250	250
Total Murray Lands .....	56 698	57 650	60 250	62 250
SOUTH AUSTRALIA .....	1 091 875	1 185 300	1 261 600	1 293 900

(a) Census population adjusted for underenumeration.

(b) Karoonda (DC) and East Murray (DC) amalgamated in March 1979.

(c) Monarto was established in July 1974. The 1966 population is included in Murray Bridge (DC).

(d) Murray Bridge (M) and Mobilong (DC) amalgamated in April 1977.

(e) Amalgamation of Sedan (DC) and Marne (DC) in January 1976.

The major urban centres in Murray Lands include Murray Bridge (population 8 740 at 30 June 1976), Renmark (3 371), Berri (2 890), Loxton (2 786), Mannum (2 137), Tailem Bend (1 999) and Barmera (1 946).

The age distribution of the population in Murray Lands and the State follows a similar pattern with no marked divergence except in the 0-9 years age group where the proportion for Murray Lands is slightly higher than that for the State.

**Age Distribution of Population: Murray Lands and South Australia, 30 June 1976**

Age Group (Years)	Murray Lands		South Australia	
	Persons	Per Cent	Persons	Per Cent
0-9 .....	11 600	19.5	213 520	17.2
10-19 .....	11 058	18.6	233 935	18.8
20-29 .....	9 232	15.5	206 364	16.6
30-39 .....	7 359	12.4	155 109	12.5
40-49 .....	6 424	10.8	137 415	11.0
50-59 .....	6 299	10.6	131 238	10.5
60-69 .....	4 489	7.6	95 377	7.7
70 and over .....	2 933	4.9	71 806	5.8
Total .....	59 393	100.0	1 244 760	100.0

In common with other areas outside Adelaide, the Murray Lands has a significantly lower proportion of overseas born persons than the State.

**Birthplace of Population: Murray Lands and South Australia, 30 June 1976 (a)**

Country of Birth	Murray Lands		South Australia	
	Persons	Per Cent	Persons	Per Cent
Australia .....	53 545	90.2	951 535	76.4
Overseas born:				
UK and Eire .....	2 286	3.8	157 879	12.7
Germany .....	416	0.7	15 392	1.2
Greece .....	964	1.6	14 706	1.2
Italy .....	611	1.0	31 943	2.6
Netherlands .....	267	0.4	10 741	0.9
Poland .....	138	0.2	6 914	0.6

**Birthplace of Population: Murray Lands and South Australia, 30 June 1976<sup>(a)</sup> (continued)**

Country of Birth	Murray Lands		South Australia	
	Persons	Per Cent	Persons	Per Cent
Yugoslavia .....	270	0.5	9 003	0.7
Other Europe .....	385	0.6	22 682	1.8
Other .....	510	0.9	23 958	1.9
Total overseas born .....	5 846	9.8	293 219	23.6
Total .....	59 393	100.0	1 244 756	100.0

(a) Population as enumerated, not adjusted for Census underenumeration.

**Births and Deaths**

The following two tables compare the number of births, birth rate, number of deaths and death rate in Murray Lands with those of the State.

**Live Births: Number Registered and Rate, Murray Lands and South Australia**

Year	Murray Lands		South Australia	
	No.	Rate (a)	No.	Rate (a)
1974 .....	1 015	17.11	20 181	16.33
1975 .....	1 005	16.76	19 986	15.95
1976 .....	1 047	17.29	18 947	15.02
1977 .....	992	16.20	19 260	15.09
1978 .....	975	15.74	18 558	14.41

(a) Number of births per 1 000 mean population.

**Deaths: Number Registered and Rate, Murray Lands and South Australia**

Year	Murray Lands		South Australia	
	No.	Rate (a)	No.	Rate (a)
1974 .....	435	7.33	10 236	8.29
1975 .....	435	7.26	9 947	7.94
1976 .....	430	7.10	9 999	7.92
1977 .....	397	6.48	9 784	7.66
1978 .....	487	7.86	9 763	7.58

(a) Number of deaths per 1 000 mean population.

**Education****Schools**

At 1 August 1979 the Education Department was responsible for two junior primary schools, thirty-three primary schools, six secondary schools, eleven area schools, two rural schools, two special schools and one school for Aboriginals in the Murray Lands region.

In addition to the Government schools, there are seven Catholic and three Lutheran primary schools in this region.

**Students at Government and Non-government Schools, Murray Lands at 1 August, 1979**

Category of School	Number of Students		
	Primary	Secondary	Total
Government .....	8 461	4 507	12 968
Non-government .....	848	—	848
Total .....	9 309	4 507	13 816

***Libraries***

Public libraries are located at Barmera, Berri, Murray Bridge and Waikerie. There are also community/school libraries at Karoonda and Pinnaroo.

***Museums***

There are a number of historical museums located in the Murray Lands region including the following National Trust Museums:

- (a) Lake Avenue Gallery and Museum at Barmera;
- (b) Napper's Old Accommodation House and the Overland Hotel, which once provided hotel and horse changing facilities for stage coaches at Overland Corner;
- (c) Wellington Police Station, Cells, Court House, Stables and Residence at Wellington;
- (d) Loxton Museum;
- (e) Ramco Village settlement which contains relics of early Australian settlement at Ramco; and
- (f) Border Cliffs Customs House on the River Murray at Renmark and the Renmark Institute museum.

***Media***

There are several newspapers printed in the region. 'Murray Valley Standard' and the 'Bridge Observer' are printed at Murray Bridge and generally circulate among the river towns. 'Border Times' is printed at Pinnaroo and circulates in the north-east of the region. 'The Murray Pioneer' is printed at Renmark, 'The Loxton News' at Loxton and 'The River News' at Waikerie.

Of the two commercial radio stations in the region, 5MU broadcasts from Murray Bridge and 5RM from Renmark. The national radio station 5MV is located at Renmark. National regional television station ABRS-3 and the commercial television station RTS-5A are located at Loxton.

***National and Conservation Parks and Reserves***

There are twenty-four conservation parks in the region. These range in size from Billiatt Conservation Park (36 815 hectares) east of Karoonda, Scorpion Springs Conservation Park (30 366 hectares) on the South Australian/Victorian border, south of Pinnaroo and Mount Rescue Conservation Park (28 385 hectares) east of Tintinara to Rilli Island Conservation Park (4 hectares) and Kapunda Island Conservation Park (1 hectare) both near Loxton. The larger parks in the Murray Mallee, consisting of uncleared mallee scrub, provide important habitat for the kangaroo and emu in addition to smaller mammals and birds.

Most of the Coorong National Park lies in the region. Recently the Park was enlarged

to 37 000 hectares by including the waters of the Coorong and the adjoining mainland to provide better protection to sand dunes and vegetation.

A section in the middle of the Coorong National Park is designated the Coorong Game Reserve. Other game reserves are Mud Islands Game Reserve in Lake Alexandrina, Moorook Game Reserve and Katarapko Game Reserve near Loxton.

Along the river, usually in the vicinity of towns, there are a number of recreational reserves which provide scenic views of the river and have camping or picnic facilities.

### Employment

The following table shows the industry of the employed population in Murray Lands and South Australia at the 1976 Census. Rural industries predominate in Murray Lands. Of the employed persons in Murray Lands, agriculture, forestry and fisheries accounted for 37.7 per cent of males and 35.1 per cent of females: proportions for the State were 8.9 per cent and 8.2 per cent respectively.

**Industry of Employed Persons: Murray Lands and South Australia, 30 June 1976**

Industry	Murray Lands		South Australia	
	Number	Per Cent	Number	Per Cent
<b>MALES</b>				
Agriculture, forestry, fishing etc. ....	6 485	37.7	31 051	8.9
Mining .....	43	0.3	3 123	0.9
Manufacturing .....	2 136	12.4	88 333	25.4
Electricity, gas and water .....	355	2.1	9 524	2.7
Construction .....	1 491	8.6	40 154	11.5
Wholesale and retail trade .....	2 319	13.5	59 120	17.0
Transport and storage .....	1 104	6.4	21 337	6.1
Communication .....	307	1.8	7 952	2.3
Finance, business services etc. ....	419	2.4	18 336	5.3
Public administration, defence .....	512	3.0	16 660	4.8
Community services .....	887	5.2	29 565	8.5
Entertainment, recreation .....	441	2.6	9 998	2.9
Other and not stated .....	685	4.0	13 174	3.8
Total employed males .....	17 186	100.0	348 327	100.0
<b>FEMALES</b>				
Agriculture, forestry, fishing etc. ....	3 486	35.1	16 402	8.2
Mining .....	4	—	342	0.2
Manufacturing .....	689	6.9	25 261	12.7
Electricity, gas and water .....	14	0.1	531	0.3
Construction .....	112	1.1	4 024	2.0
Wholesale and retail trade .....	1 764	17.8	41 602	20.9
Transport and storage .....	103	1.0	3 194	1.6
Communication .....	153	1.5	2 467	1.3
Finance, business services etc. ....	200	2.0	14 878	7.5
Public administration, defence .....	136	1.4	5 942	3.0
Community services .....	1 737	17.5	54 053	27.2
Entertainment, recreation .....	651	6.6	15 787	7.9
Other and not stated .....	873	8.8	14 529	7.3
Total employed females .....	9 922	100.0	199 008	100.0

In Murray Lands 68.4 per cent of persons aged 15 and over had an annual personal income of less than \$6 000 (compared to 59.3 per cent in South Australia) and 7.7 per cent had an annual personal income of more than \$9 000 (compared to 12.0 per cent for South Australia).

#### Annual Personal Income: Murray Lands and South Australia, 30 June 1976

Annual Personal Income	Murray Lands		South Australia	
	Persons	Per cent	Persons	Per cent
Nil .....	5 744	13.7	133 529	14.6
Less than \$1 500 .....	3 639	8.7	67 986	7.4
\$1 500 - \$2 000 .....	3 977	9.5	72 525	7.9
Over \$2 000 - \$3 000 .....	4 607	11.0	87 203	9.5
Over \$3 000 - \$4 000 .....	3 345	8.0	53 974	5.9
Over \$4 000 - \$5 000 .....	3 421	8.1	55 526	6.1
Over \$5 000 - \$6 000 .....	3 928	9.4	72 750	8.0
Over \$6 000 - \$7 000 .....	3 520	8.4	88 096	9.6
Over \$7 000 - \$8 000 .....	2 470	5.9	73 019	8.0
Over \$8 000 - \$9 000 .....	1 741	4.1	52 647	5.7
Over \$9 000 - \$12 000 .....	2 064	4.9	68 174	7.5
Over \$12 000 - \$15 000 .....	686	1.6	22 306	2.4
Over \$15 000 - \$18 000 .....	269	0.6	8 832	1.0
Over \$18 000 .....	263	0.6	9 695	1.1
Not stated .....	2 311	5.5	48 608	5.3
Total Population aged 15 years and over	41 986	100.0	914 690	100.0

#### Health Facilities

In Murray Lands there are public hospitals at Barmera, Berri, Karoonda, Lameroo, Loxton, Mannum, Murray Bridge, Pinnaroo, Renmark and Tailem Bend.

There are branches of the Red Cross Society in several towns and St John Ambulance centres are located at Barmera, Berri, Karoonda, Lameroo, Loxton, Mannum, Murray Bridge, Renmark, Swan Reach and Tailem Bend.

The Mothers and Babies Health Association fulfils an important role in the community life of the region particularly servicing the more isolated areas. Centres are at Barmera, Berri, Loxton, Murray Bridge, Renmark and Waikerie. Visits are made to many other areas within the region on a regular basis.

#### Welfare Facilities

The Department of Community Welfare provides welfare services to the region through its district offices at Berri and Murray Bridge and branch offices at Renmark and Waikerie.

#### Water Supply

The River Murray is the main source of fresh water in South Australia. In long periods of drought, before its flow was controlled by dams and weirs, the River Murray would cease to flow and become a series of salty lagoons. In years of flood it would inundate the land on either side of its banks causing extensive damage to crops and settlements.

The amount of water flowing in the River Murray is now regulated by three main storages; Lake Victoria, Hume and Dartmouth dams. River levels above Blanchetown

are controlled by a series of weirs while the level of the river below Blanchetown and the ingress of sea water is controlled by five barrages near the Murray mouth.

Pipelines from the River Murray at Murray Bridge, Mannum, Swan Reach, Tailem Bend and Morgan supply water to many parts of the State.

### Irrigation

The real foundation of the irrigation industry in South Australia was laid by the two Chaffey brothers who had great practical experience in the artificial application of water in arid and semi-arid areas in California and Canada. They arrived in 1886 to establish an irrigation area in Victoria, but were unable to reach an agreement with the Victorian Government. Persuaded to come to South Australia, they eventually commenced their operations at a location which was to become the town of Renmark.

During the period of extensive unemployment in 1893 the Government authorised the formation of a number of village settlements run on community lines. These were started at Lyrup, Pyap, Waikerie, Ramco and Kingston, among other locations. Owing to lack of experience however, most of these ventures failed. Lyrup is the only village settlement remaining today. Pyap is now an Irrigation Trust area, Waikerie and Ramco were incorporated as a Government irrigation area in 1912, while Kingston was reorganised. New settlements were also established at Berri in 1911 and Cobodgla in 1918. Immediately after the 1914-18 War additional areas were developed for soldier settlement at Cobodgla, Waikerie, Berri and other centres. No further Government irrigation areas were established until after the 1939-45 War when Loxton irrigation area was founded. After 1950 private Riverland irrigation developed rapidly which was in marked contrast to the pre-war trend. Since 1968 however, expansion of irrigation on the River Murray has had to be curtailed to ensure that adequate supplies of water are available to meet demands at all times for all purposes.

The principal irrigation areas in South Australia are along the River Murray. Under the terms of the River Murray Waters Agreement between the Commonwealth Government and the States of New South Wales, Victoria and South Australia, this State is entitled to receive a minimum flow of 1 845 000 megalitres per year. This allocation necessarily forms the basis of planning the utilisation of river water for both irrigation and water supply purposes even though flows may exceed the entitlement at times.

Because of the river's characteristics two main types of irrigation are used:

- (a) high lift pumping over the valley sides onto the plain; and
- (b) gravity flood irrigation in the reclaimed swamp areas in the lower reaches of the Murray. (This method is, of course, limited to areas which are below river level.)

The economics of comparatively high lift pumped water supply limits the bulk of irrigation to high return horticultural plantings (vines, citrus, vegetables) as opposed to cereal crops, etc.

### Salinity

Salinity levels in the River Murray have been increasing in recent years, one of the main reasons being that surplus irrigation water raises the level (water table) of the naturally high saline ground water, thus increasing its flow into the river.

Salinity levels above 850 E.C. (electrical conductivity) units damage some irrigated plantings, causing loss of yields, and over an extended period trees or vines may die. The conversion to undertree irrigation lessens the effect of salinity on plantings but the problem of surplus water disposal still exists.

A large-scale scheme is being developed to eliminate the problem of saline drainage. It involves collecting the excess water from several large irrigation areas and pumping it

to an evaporation basin at Noora, some distance from the river. This reduces the seepage of saline water back into the river, thereby lowering salinity levels and lessening further deterioration of river quality.

Extensive work is being carried out by the Engineering and Water Supply Department in Government Irrigation Areas to convert the existing open channel irrigation systems to piped systems.

#### Sewerage

The first common effluent drainage scheme established in a country township in South Australia was installed at Pinnaroo in 1962 to dispose of septic tank effluent from forty properties in the commercial area.

Barmera was the first township to provide a scheme for all premises. This was completed in 1965 and drainage connections provided for 493 allotments.

Common effluent drainage schemes have been installed in the following townships: Barmera, Berri, Cobdogla, Lameroo, Loxton, Meningie, Paringa, Pinnaroo, Point McLeay, Renmark, Tintinara and Waikerie.

The establishment of these schemes has eliminated septic tank effluent and sullage waste disposal problems, protected water supplies, prevented pollution of the River Murray and adjacent lakes and improved environmental conditions in these townships.

A common effluent drainage scheme now being installed at Tailem Bend will be completed and operational by June 1980.

Applications have been received by the South Australian Health Commission for assistance to establish drainage schemes at Coonalpyn, Glossop, Karoonda, Kingston, Moorook, Morgan, Parilla and Swan Reach.

#### Electricity Supply

Local councils or, private enterprise operating under franchise, established electricity supply in towns of the region at: Renmark (1916), Murray Bridge (1920), Loxton and Mannum (1922), Berri and Morgan (1924), Waikerie (1928), Barmera (1936) and Karoonda (1946). The Renmark Irrigation Trust established its electricity supply in 1925.

A 33 kilovolt (kV) transmission line to Mannum was completed in 1940 by the Adelaide Electric Supply Company and this was the first occasion that electricity from Adelaide had been extended into Murray Lands. Another major extension into the area was completed in 1943 when a 66 kV transmission line to Morgan was completed. This line provided supply for the Morgan to Whyalla water pumping project.

In 1946, the Electricity Trust of South Australia was established and one of its immediate tasks was the extension of supply to country areas. In 1947, the 66 kV line to Morgan was extended to Cadell to meet the requirements of the Irrigation Department, and by 1950 an extension of this line to Berri had been commenced. A 33 kV line from Berri to Loxton had already been built.

By early 1953, a 33 kV line from Mannum to Murray Bridge had been completed and by late 1954 a 132 kV transmission line and an associated substation at Mannum to provide supply for the pumping of water from Mannum to Adelaide was in service.

During 1953, a 132 kV transmission line was constructed from North West Bend to Radium Hill to supply electricity to the mine in the area. This line was subsequently dismantled in 1967 after the cessation of mining activities.

In the Riverland, a 132 kV transmission line was built from North West Bend to Berri but on the opposite side of the river to the existing 66 kV line. This line, together with a 132 kV substation at Berri, was completed in 1955.

During 1960, construction continued on a 33 kV line to the townships of Karoonda,

Lameroo and Pinnaroo. By 1962, a 33 kV line had been built as far south as Coonalpyn and across to Meningie on Lake Albert.

Substations of 132 kV were established at Tailem Bend in 1964 and at Mobilong in 1970. The Tailem Bend substation was subsequently extended to a 275 kV section in 1976. These substations not only supplied electricity to the Murray Lands but also facilitated the transmission of electricity to the South East of the State.

To extend its supply to the more remote areas of Murray Lands the Trust has used the low cost SWER (Single Wire Earth Return) system. Rural consumers benefit most from this system.

The Electricity Trust has regional headquarters at Murray Bridge with local district depots and maintenance gangs at Mannum, Lameroo and Coonalpyn. Another regional headquarters at Barmera has depots at Loxton and Waikerie.

These two regional headquarters are responsible for construction and maintenance of Trust mains and supplying services to 32 500 consumers, most of whom are situated in the Murray Lands area.

### Housing

The number of the occupied private dwellings in the Murray Lands as a proportion of the State total has fallen from 5.1 per cent in 1966 to 4.5 per cent in 1976.

**Occupied Private Dwellings, Murray Lands and South Australia**

Area	Census 30 June		
	1966	1971	1976
Barmera (DC) .....	943	1 023	1 131
Berri (DC) .....	1 340	1 421	1 608
Browns Well (DC) .....	139	127	106
Coonalpyn Downs (DC) .....	471	530	532
Karoonda-East Murray (DC) (a) .....	535	500	500
Lameroo (DC) .....	483	455	488
Loxton (DC) .....	1 625	1 710	1 869
Mannum (DC) .....	838	871	975
Meningie (DC) .....	1 061	1 088	1 139
Monarto (M) (b) .....	.	81	73
Morgan (DC) .....	331	334	368
Murray Bridge (DC) (c) .....	2 761	3 042	3 743
Paringa (DC) .....	330	341	376
Peake (DC) .....	295	293	284
Pinnaroo (DC) .....	463	437	434
Renmark (M) .....	1 754	1 822	1 910
Ridley (DC) (d) .....	517	531	547
Truro (DC) .....	169	160	178
Waikerie (DC) .....	1 052	1 149	1 334
Unincorporated .....	63	66	64
Total Murray Lands .....	15 170	15 981	17 659
South Australia .....	299 630	342 064	390 514

(a) Karoonda (DC) and East Murray (DC) amalgamated in March 1979.

(b) Monarto was established in July 1974. The 1966 population is included in Murray Bridge (DC).

(c) Murray Bridge (M) and Mobilong (DC) amalgamated in 1977.

(d) Amalgamation of Sedan (DC) and Marne (DC) in January 1976.

During 1978-79 there were 353 houses and seventy-three other dwellings completed in the Murray Lands. The comparable figures for 1977-78 were 443 and eighty-nine respectively. During 1978-79 the South Australian Housing Trust completed seventy-nine dwellings and at 30 June 1979 had twenty-six dwellings under construction.

### Rural Industries

Agricultural activity varies widely throughout the region because of the influence of differing climatic and geographic conditions. The lushness of the Murray River Valley, incorporating large areas of irrigated orchards, vineyards and pasture, provides the major contrast in the regional landscape. In the drier Murray Mallee area the chief agricultural activities are sheep and beef raising, cereal growing with dairying being significant in the Lower Murray districts. Overall, the Murray Lands Statistical Division accounts for 99.8 per cent of the State's citrus fruit production, 65.2 per cent of total grape production, 94.9 per cent of peach and apricot production and contains 13.4 per cent of the State's total number of sheep.

#### *Horticulture*

In 1979 orchards and vineyards in the Riverland occupied a total of 22 338 hectares. The region, in the 1978-79 season, produced 131 435 tonnes of oranges and 9 324 tonnes of lemons and limes which represented 92.9 per cent and 88.2 per cent respectively of the State's total production.

The establishment of the Riverland Fruit Products Co-operative Cannery at Berri led to a rapid increase in the planting of stone fruits for canning during the 1950s. Between 1967 and 1973, the region produced an average of 19 000 tonnes of apricots and 26 000 tonnes of peaches and nectarines, representing about 70 per cent and 75 per cent respectively of the State's average annual production.

The region's contribution to the State's total grape production for winemaking reached a peak of 70 per cent in 1970, but has since levelled off to 60 per cent. The increasing demand for wine grapes in the late 1960s made some inroads into the quantity of dried vine fruit produced in the area, but it remains the major source of this commodity in South Australia, accounting for 98.3 per cent of the State's total production in 1979.

Vegetables are grown to a lesser extent, but an increasing interest in their cultivation is demonstrated by the fact that the region contributes approximately 30 per cent of the State's annual tomato crop.

South of the Riverland, horticultural activity is confined mainly to the reclaimed areas of the Murray, with the Mypononga Irrigation Area being the leading locality. The area around Murray Bridge is becoming increasingly important in the production of glasshouse tomatoes and cucumbers, most of which are shipped for sale on the Melbourne market.

**Area of Selected Crops, Riverland**

Crops	1976-77	1977-78	1978-79
Orchards .....	9 264	9 252	9 252
Vineyards .....	13 072	13 227	13 086
Vegetables .....	783	834	949

*Cereals*

Wheat, the principal cereal crop in Murray Lands, is grown mainly south of the River Murray. Although considerable fluctuations have occurred from year to year, the trend has been towards an increase in the area sown to wheat. Farming patterns south of the River are conditioned by soil moisture, which reflects the low and unreliable rainfall, high evaporation and widespread sandy soil. As can be expected, yields also vary widely depending upon the adequacy of seasonal rainfall.

**Wheat for Grain, Murray Lands**

Particulars	Unit	1976-77	1977-78	1978-79
Area sown .....	hectares	98 570	205 708	254 280
Production .....	tonnes	96 991	69 229	295 298
Average yield per hectare .....	tonnes	0.98	0.34	1.16

Barley is generally sown on the light mallee sands in the southern part of the region where the rainfall is higher and more reliable.

Oats are grown to a much lesser extent and are used as a source of fodder either as grain or hay.

Cereal rye has been widely sown to stabilise soil in the steep sandy ridges, but is being replaced by barley as the erosion hazard lessens.

**Cereals for Grain, Murray Lands, 1978-79**

Particulars	Unit	Wheat	Barley	Oats	Cereal Rye
Area sown .....	hectares	254 280	264 685	21 867	30 017
Production .....	tonnes	295 298	221 058	15 699	12 205
Average yield per hectare .....	tonnes	1.16	0.84	0.72	0.41

*Sheep*

With the development of new and improved pastures, the number of sheep in the region has increased progressively, subject to seasonal and market fluctuations. In 1979 the region contained 2 million sheep, representing a slight upward trend after the effects of several consecutive poor seasons.

**Sheep: Numbers by Age and Sex, Murray Lands  
At 31 March**

Year	Rams	Ewes		Wethers	Lambs	Total
		Breeding	Other			
1977 .....	28 519	1 217 441	78 247	307 335	362 007	1 993 549
1978 .....	27 098	1 136 193	67 675	255 739	397 998	1 884 703
1979 .....	29 600	1 197 684	62 898	253 352	457 920	2 001 454

The wool clip for the season 1978-79 was 11 613 933 kg which represented about 14 per cent of the State's total wool clip.

**Sheep and Lambs Shorn: Wool Clip and Average Weight per Fleece, Murray Lands**

Particulars	Unit	1976-77	1977-78	1978-79
Sheep and lambs shorn .....	number	2 389 600	2 249 384	2 215 127
Wool clip .....	kg	12 808 884	11 685 013	11 613 933
Average per fleece .....	kg	5.36	5.19	5.24

*Cattle for Meat Production*

The number of beef cattle in the region at 31 March 1979 was 84 252, representing approximately 9 per cent of the State's total. The majority of these were to be found south of the River Murray with the largest concentrations occurring in the local government areas of Coonalpyn Downs and Meningie. In the Riverland, beef cattle are carried mainly in the Loxton and Paringa districts where they are fattened on irrigated pastures and stands of dry-land lucerne.

**Cattle for Meat Production, Murray Lands  
At 31 March**

Year	Bulls	Cows	Calves	Total(a)
1977 .....	2 842	79 872	55 218	153 077
1978 .....	2 131	54 199	35 659	103 565
1979 .....	1 746	46 486	28 708	84 252

(a) Includes other cattle for meat production.

*Cattle for Milk Production*

Swamps along the River Murray flood plain and land adjacent to Lakes Albert and Alexandrina have been reclaimed for dairy farming. Although dairy cattle numbers in the region have declined in recent years, improved swamp drainage and expansion of more productive pastures increased milk production. Factories for the processing of milk and the manufacture of dairy products are at Jervois and Murray Bridge.

**Cattle for Milk Production, Murray Lands  
At 31 March**

Year	Bulls	Cows (a)	Heifers (one year and over)	Calves	Total
1977 .....	420	23 449	5 841	4 503	34 213
1978 .....	390	23 540	5 609	4 148	33 687
1979 .....	380	22 713	5 185	4 661	32 939

(a) Includes house cows.

*Pigs*

There has been a steady increase in the number of pigs in the region. Their popularity as a sideline has been largely influenced by a favourable market and their ability to fatten on dry feed produced on the farms. At 31 March 1979, there were 60 369 pigs in the region representing 18.3 per cent of the State's total.

### Fisheries

The commercial fishery is concentrated on the River Murray system. Operators are licensed to fish either on a particular reach or the lakes and the Coorong. Approximately 200 persons are employed either full-time or part-time in the fishery.

The major species taken on the reaches are golden perch and Murray cod while flounder, mulloway and yellow-eye mullet are taken in the Coorong. Significant numbers of European carp are taken from the river for rock lobster bait. The total value of the catch in 1978-79 was approximately \$800 000. The bulk of the catch is sold on the Adelaide and Melbourne markets.

### Manufacturing

**Manufacturing Establishments: Summary of Operations, Murray Lands and South Australia, 1977-78 (a)**

Particulars	Unit	Murray Lands	South Australia
Number of establishments .....	Number	85	2 170
Employment (b):			
Males .....	Number	2 019	85 991
Females .....	Number	633	24 035
Persons .....	Number	2 652	110 026
Wages and salaries (c) .....	\$'000	23 199	1 015 192
Turnover .....	\$'000	138 920	3 966 980
Stocks:			
Opening .....	\$'000	46 815	779 102
Closing .....	\$'000	52 311	856 850
Purchases, transfers in .....	\$'000	97 746	2 372 527
Value added .....	\$'000	46 670	1 672 200
Fixed capital expenditure .....	\$'000	3 838	171 974

(a) Excludes single establishment enterprises employing fewer than four persons.

(b) Includes working proprietors.

(c) Excludes drawings of working proprietors.

Most of the manufacturing activity is carried out in a few regional centres. Large industries in the Murray Lands include an abattoir, flour mill, and electrical machinery and equipment plant at Murray Bridge, an agricultural machinery manufacturer at Mannum, a canned fruit manufacturer, and fruit juice manufacturer at Berri. There are also two large container manufacturers in Berri to provide suitable packaging for the needs of local industry.

**Manufacturing Establishments: Number of Establishments and Employment Selected Local Government Areas, Murray Lands, 1977-78 (a)**

Local Government Area	Establishments at End of Year	Average Employment Over Whole Year (b)
Murray Bridge (DC) .....	Number	Persons
27	1 072	
Berri (DC) .....	18	834
13	148	
Loxton (DC) .....	10	300
Renmark (DC) .....		
Total .....	68	2 354

(a) Excludes single establishment enterprises employing fewer than four persons.

(b) Includes working proprietors.

A major manufacturing activity carried out in the Murray Lands is the production of wine and brandy. In the 1977-78 financial year these wineries produced over 9.25 million litres of fortified wine (37 per cent of South Australian production and 28 per cent of Australian production) and over 24 million litres of unfortified wine (21 per cent of South Australian production and 13 per cent of Australian production). Brandy production for that period exceeded 1.25 million litres of alcohol (48 per cent of South Australian production and 46 per cent of Australian production).

The following table shows the importance of the wine industry in the Murray Lands.

**Wine and Brandy Production: Summary of Operations, Murray Lands and South Australia, 1977-78<sup>(a)</sup>**

Particulars	Unit	Murray Lands	South Australia
Number of establishments .....	Number	14	80
Employment (b):			
Males .....	Number	397	1 822
Females .....	Number	93	727
Persons .....	Number	490	2 549
Wages and salaries (c) .....	\$'000	4 110	21 696
Turnover .....	\$'000	25 234	143 686
Value added .....	\$'000	11 508	57 501
Fixed capital expenditure .....	\$'000	1 826	6 637

(a) Excludes single establishment enterprises employing fewer than four persons.

(b) Includes working proprietors.

(c) Excludes drawings of working proprietors.

## Transport

### Roads

The Murray Lands has an extensive system of roads based on four major highways through the area. The Princes Highway services Meningie and the southern area. The Dukes Highway in conjunction with the Ouyen Highway services the south-eastern section of the area and the Sturt Highway the northern area. The length of roads in the Murray Lands at 30 June 1972 was 16 356 kilometres of which 14 264 kilometres were sealed.

The River Murray traverses the area and presents a barrier to road transport. The Highways Department operates fifteen punts at thirteen locations along the River Murray to facilitate vehicle crossings. Five road bridges have been constructed and these, together with the punts, provide crossing points.

### Motor Bus Services

Several privately owned bus services operate under licence from the State Transport Authority. Daily services are operated between Adelaide and most major towns in the area with local feeder services to the remaining towns.

### Railways

The towns of Cambrai, Waikerie, Loxton, Barmera, Peebinga and Pinnaroo are the termini of branch lines which form a railway network throughout the Murray Lands. This network connects with the Adelaide to Melbourne line. A daily goods service operates on the network but there is no passenger service. Grain is the major commodity transported on the system.

The railway line crosses the River Murray via bridges located at Murray Bridge and Paringa.

### Air Transport

The Murray Lands has three licensed aerodromes located at Loxton, Waikerie and Renmark. Renmark is serviced from Adelaide by a licensed commuter operator on five days a week.

### Postal and Telecommunication Services

Sixty-two towns in the Murray Lands have post offices with continuous service and a further twenty-three have non-continuous service.

Forty-four towns have the Subscriber Trunk Dialling (STD) telephone service and forty-one have the manual service.

### Retail Trade

At 30 June 1974 there were 607 retail establishments and ninety-seven selected service establishments operating in the Murray Lands. The number of retail and selected service establishments represented 5.3 per cent of the State total and 4.0 per cent of total retail sales. Twenty-nine per cent of the retail establishments operating in the region were food stores, and twenty-seven per cent were motor vehicle dealers, petrol and tyre retailers, and crash repair workshops whose retail sales represented 25 per cent and 36 per cent of total retail sales in the region respectively.

### Retail and Selected Service Establishments: Summary of Operations by Industry Group Murray Lands, 1973-74

Industry Group	Number of Establishments	Retail Sales	Turnover (a)
Department, variety and general stores .....	37	6 849	7 377
Food stores .....	202	16 101	16 359
Clothing, fabric and furniture stores .....	63	4 986	5 017
Household appliance and hardware stores .....	51	3 016	4 039
Motor vehicle dealers, petrol and tyre retailers .....	190	23 666	31 315
Other retailers .....	57	3 555	3 605
Total retail establishments .....	600	58 175	67 711
Restaurants, licensed hotels and clubs .....	56	6 757	9 473
Hairdressing and beauty salons .....	36	33	301
Total selected service establishments .....	92	6 789	9 774
Total retail and selected service establishments .....	692	64 964	77 485

(a) Sales of goods (retail and wholesale) and all other operating revenue.

### Tourism

Attractions in the region include tours of the region's wineries, fruit and juice canneries and historical buildings at Morgan and Loxton. River cruises of various duration commence from Goolwa and Murray Bridge. An estimated 60 per cent of visitors to the region are drawn from the Adelaide metropolitan area, with an estimated 20 per cent of visitors coming from Victoria.

Caravan and camping parks provide a substantial component of visitor accommodation available in the region. Hotel and motel accommodation is available at the main towns and houseboats are available for hire. Many holiday homes and shacks have been erected along the river.

There are pronounced seasonal peaks in visitor activity in the region during the Christmas-New Year and May school holiday periods and during the Orange Festival in

September. During the fruit picking season a component of the increase in visitor activity can be attributed to itinerant casual workers.

At 30 June 1979 in the Murray Lands there were nine licensed hotels with facilities and four licensed and twelve unlicensed motels providing accommodation for visitors with a total of 644 rooms. There were also twenty-four caravan parks providing 2 665 powered and unpowered sites and 233 on-site vans and cabins.

#### **Recreation and Sport**

Many recreational activities such as pleasure boating, canoeing, waterskiing and fishing are pursued on the River Murray, Lakes Alexandrina and Albert, and the Coorong.

The relatively inaccessible and undisturbed shores of the Younghusband Peninsula and the bushland of the Murray Mallee conservation parks attract people interested in nature study, photography and bushwalking.

The region is popular with duck hunters who either obtain permission to hunt from private property or use any of the four game reserves in the region.

Relatively flat terrain and the usually fine, clear weather make the region suitable for gliding and there are several gliding clubs in the region with Waikerie being one of the foremost gliding centres in Australia. The World Gliding Championship was held at Waikerie in 1974.

Many sporting facilities are available in the towns with football, cricket, tennis, bowls and basketball being the most popular. There is a good quality turf race course at Murray Bridge and for golf enthusiasts there are 18-hole golf courses at Murray Bridge, Renmark, Berri, Barmera, Waikerie, Lameroo, Pinnaroo and Loxton.

Yachting regattas and State championship heats for some yacht classes are sailed on Lake Bonney.

## **APPENDIX A**

### **STATISTICAL SUMMARY**

In the next 21 pages, a historical summary of some of the more important statistics relating to South Australia is shown. This is intended to present a general picture of the development of the State, with details being given (wherever they are available) for every fifth year for the period 1836-1956, and for each single year thereafter. Naturally the range of statistics available for the early years of the colony is very limited, and in addition it is not always possible to achieve perfect comparability in presenting details covering a period in excess of 140 years. Generally, all series on each page relate to either financial or calendar years but some financial year series have been included on pages which contain information shown in calendar years.

The first year shown on each page is the earliest for which any series on that page is available. Blanks at the top of some columns indicate that information relating to these particular series either was not collected or is not available for these early years, or is not available on a basis comparable to more recent statistics.

All major breaks in series are covered by footnotes, but minor changes are not so recorded, and the statistics should be interpreted with this in mind. An example can be quoted from the table on deaths from principal causes (page 614) where comparability is affected somewhat by changes in classification, particularly in 1950, but no footnote to this effect has been included.

The following standard symbols have been used throughout the summary:

<i>n.a.</i>	not collected, not available for publication
—	nil
<i>p</i>	preliminary information subject to revision
<i>n.y.a.</i>	not yet available
—	break in continuity of figures

## POPULATION(a)

Year	Population Estimate at 31 Dec.			Annual Population Growth			
				Recorded Natural Increase (b)	Rate of Natural Increase (c)	Total Increase	Rate of Popula- tion Growth
	Males	Females	Persons				
1836 .....	309	237	546			546	
1841 .....	8 755	6 730	15 485			855	5.84
1846 .....	14 711	11 182	25 893	577	22.29	3 433	15.29
1851 .....	37 321	29 217	66 538	1 786	26.85	2 838	4.46
1856 .....	56 264	51 622	107 886	3 341	30.97	10 499	10.78
1861 .....	67 409	63 403	130 812	3 589	28.00	5 230	4.17
1866 .....	88 024	80 883	168 907	4 029	24.39	7 430	4.60
1871 .....	97 019	91 625	188 644	4 704	25.21	4 098	2.22
1876 .....	116 894	107 666	224 560	4 674	21.51	14 484	6.89
1881 .....	152 453	133 518	285 971	6 696	23.81	9 578	3.47
1886 .....	160 814	145 896	306 710	6 943	22.54	-2 603	-0.84
1891 .....	168 826	155 895	324 721	6 526	20.23	5 774	1.81
1896 .....	179 024	173 043	352 067	5 974	16.95	.99	0.03
1901 .....	(d)180 446	(d)178 890	(d)359 330	(d)5 105	14.29	(d)2 080	0.58
1906 .....	184 803	181 710	366 513	5 049	13.90	3 892	1.07
1911 .....	214 061	205 331	419 392	7 019	17.05	12 530	3.08
1916(e) .....	212 585	229 253	441 838	6 780	15.35	-4 147	-0.93
1921 .....	251 170	250 572	501 742	6 992	14.07	10 736	2.19
1926 .....	285 013	275 912	560 925	6 606	11.92	13 877	2.54
1931 .....	289 397	287 682	577 079	4 191	7.28	2 612	0.45
1936 .....	294 835	294 935	589 770	3 447	5.86	3 008	0.51
1941(e) .....	301 645	304 721	606 366	4 677	7.78	7 310	1.22
1946(e) .....	317 238	323 180	640 418	9 352	14.72	9 536	1.51
1951 .....	375 188	368 597	743 785	10 279	14.03	20 942	2.90
1956 .....	436 807	425 145	861 952	11 371	13.40	27 291	3.27
1957 .....	448 411	437 841	886 252	11 960	13.68	24 300	2.82
1958 .....	458 401	449 652	908 053	12 304	13.72	21 801	2.46
1959 .....	471 868	462 629	934 497	12 429	13.49	26 444	2.91
1960 .....	483 802	473 220	957 022	13 162	13.93	22 525	2.41
1961 .....	494 600	484 800	979 400	14 584	15.03	22 400	2.68
1962 .....	503 200	495 000	998 200	13 149	13.31	18 800	1.93
1963 .....	514 700	507 700	1 022 400	13 185	13.05	24 200	2.42
1964 .....	529 100	522 900	1 052 000	12 002	11.57	29 600	2.89
1965 .....	544 300	538 700	1 083 000	12 146	11.38	31 000	2.95
1966 .....	554 000	549 800	1 103 700	11 017	10.07	20 700	1.92
1967 .....	559 300	556 700	1 115 900	11 315	10.19	12 200	1.10
1968 .....	566 700	565 400	1 132 100	11 291	10.06	16 200	1.45
1969 .....	574 700	574 700	1 149 400	12 640	11.09	17 200	1.52
1970 .....	584 400	585 900	1 170 200	12 479	10.77	20 900	1.81
1971 .....	597 100	598 300	1 195 400	13 310	11.32	25 200	1.63
1972 .....	603 800	605 700	1 209 500	12 080	10.05	14 100	1.18
1973 .....	612 800	614 500	1 227 200	10 572	8.68	17 700	1.46
1974 .....	625 700	627 900	1 253 600	9 945	8.04	26 300	2.15
1975 .....	628 000	629 300	1 257 300	10 039	8.01	3 700	0.30
1976 .....	633 400	635 300	1 268 800	8 948	7.09	11 500	0.91
1977 .....	640 800	643 000	1 283 800	9 476	7.42	15 100	1.19
1978 .....	643 900	647 200	1 291 100	8 796	6.83	7 300	0.57

(a) Figures before January 1962 exclude full-blood Aboriginals. Figures from 1971 have been adjusted to take account of underenumeration and a conceptual change in the measure of residency. (b) Births and deaths of full-blood Aboriginals, where identified in registration, have been excluded from natural increase figures before 1 January 1962. (c) Excess of births over deaths per 1 000 of mean population. (d) Northern Territory included before 1901, but subsequently excluded. (e) During the 1914-18 War, defence personnel leaving the State were treated as departures, but during the 1939-45 War they were retained in the population and troops of other States and countries were excluded.

## DEMOGRAPHY

Year	Live Births		Infant Deaths (a)		Deaths				Rates from Principal Causes (b)			
	Number	Rate (b)	Number	Rate (c)	Number	Rate (b)				Diseases of the Heart	Cancer	Tuberculosis
							Diseases of the Heart	Cancer	Tuberculosis			
1846 .....	937	36.19			360	14.02						
1851 .....	2 759	41.47	539	195.36	973	14.62						
1856 .....	4 488	41.60	610	135.92	1 147	10.63						
1861 .....	5 551	43.30	1 064	191.68	1 962	15.30						
1866 .....	6 782	41.06	1 385	204.22	2 753	16.67						
1871 .....	7 082	37.95	851	120.16	2 378	12.74						
1876 .....	8 224	37.84	1 228	149.32	3 550	16.34						
1881 .....	10 708	38.08	1 364	127.38	4 012	14.27						
1886 .....	11 177	36.29	1 409	126.06	4 234	13.75						
1891 .....	10 737	33.36	976	90.77	4 211	13.08						
1896 .....	10 012	28.44	1 015	101.02	4 038	11.47						
1901 .....	9 079	25.41	909	100.12	3 974	11.12						
1906 .....	8 921	24.57	675	75.66	3 872	10.66						
1911 .....	11 057	28.86	670	60.60	4 038	9.81	1.04	0.74	0.85			
1916 .....	11 857	26.85	868	73.21	5 077	11.50	1.29	0.81	0.93			
1921 .....	11 974	24.09	784	65.48	4 982	10.02	1.13	0.92	0.80			
1926 .....	11 483	20.73	509	44.33	4 877	8.81	1.00	0.96	0.71			
1931 .....	9 079	15.77	330	36.35	4 888	8.49	1.39	1.20	0.58			
1936 .....	8 911	15.16	277	31.09	5 464	9.29	1.87	1.26	0.40			
1941 .....	10 965	18.24	356	32.47	6 288	10.46	2.62	1.26	0.37			
1942 .....	11 278	18.51	448	39.72	6 712	11.02	2.73	1.25	0.41			
1943 .....	13 145	21.43	482	36.67	6 482	10.57	2.82	1.31	0.35			
1944 .....	13 311	21.49	387	29.07	5 984	9.66	2.64	1.27	0.30			
1945 .....	14 033	22.38	394	28.08	6 049	9.65	2.87	1.23	0.32			
1946 .....	15 813	24.90	428	27.07	6 461	10.17	3.03	1.29	0.29			
1947 .....	16 317	25.23	396	24.27	6 215	9.61	2.86	1.28	0.30			
1948 .....	15 870	24.00	472	29.74	6 748	10.20	3.08	1.42	0.28			
1949 .....	16 042	23.58	444	27.68	6 373	9.37	2.90	1.23	0.21			
1950 .....	17 306	24.39	416	24.04	6 740	9.50	3.05	1.24	0.19			
1951 .....	17 463	23.84	428	24.51	7 184	9.81	3.24	1.24	0.15			
1952 .....	17 884	23.69	413	23.09	7 050	9.34	3.10	1.29	0.12			
1953 .....	18 156	23.39	375	20.65	6 962	8.97	3.00	1.27	0.06			
1954 .....	18 227	22.89	388	21.29	7 179	9.01	3.11	1.22	0.08			
1955 .....	18 494	22.55	431	23.30	7 536	9.19	3.12	1.28	0.06			
1956 .....	18 964	22.35	377	19.88	7 593	8.95	3.24	1.16	0.05			
1957 .....	19 536	22.35	403	20.63	7 576	8.67	2.91	1.29	0.05			
1958 .....	20 047	22.35	449	22.40	7 743	8.63	2.93	1.26	0.07			
1959 .....	20 372	22.12	422	20.71	7 943	8.62	2.89	1.22	0.05			
1960 .....	20 966	22.19	397	18.94	7 804	8.26	3.06	1.21	0.04			
1961 .....	22 399	23.09	448	20.00	7 815	8.06	2.92	1.26	0.06			
1962 .....	21 361	21.67	409	19.15	8 232	8.35	3.06	1.37	0.03			
1963 .....	21 367	21.20	399	18.67	8 201	8.14	2.99	1.27	0.04			
1964 .....	20 866	20.16	397	19.03	8 906	8.61	3.24	1.32	0.01			
1965 .....	20 891	19.63	385	18.43	8 788	8.26	3.11	1.30	0.03			
1966(d) .....	20 362	18.61	364	17.88	9 345	8.54	3.22	1.32	0.02			
1967 .....	20 386	18.37	346	16.97	9 071	8.17	3.09	1.35	0.02			
1968 .....	21 207	18.89	345	16.27	9 916	8.83	3.29	1.41	0.02			
1969 .....	21 977	19.28	347	15.79	9 337	8.19	2.96	1.47	0.02			
1970 .....	22 617	19.52	367	16.23	10 138	8.75	3.20	1.43	0.01			
1971 .....	22 996	19.39	366	15.92	9 686	8.17	2.89	1.40	0.02			
1972 .....	21 844	18.17	367	16.80	9 764	8.12	2.94	1.46	0.01			
1973 .....	20 407	16.75	276	13.52	9 835	8.07	2.95	1.47	0.01			
1974 .....	20 181	16.33	312	15.46	10 236	8.29	2.96	1.49	0.01			
1975 .....	19 986	15.95	222	11.11	9 947	7.94	2.85	1.52	0.01			
1976 .....	18 947	15.02	276	14.57	9 999	7.92	2.91	1.45	0.00			
1977 .....	19 260	15.08	221	11.47	9 784	7.66	2.80	1.50	0.00			
1978 .....	18 558	14.41	227	12.23	9 763	7.58	2.80	1.54	0.00			
1979 .....	18 478	14.28	166	8.98	9 661	7.46	2.76	1.50	0.00			

(a) Under one year of age from 1871, under two years of age in previous years.

(b) Rate per 1 000 of mean population. (c) Rate per 1 000 live births registered.

(d) Vital events of full-blood Aboriginals, where identified in registrations, were excluded before 1966.

## SOCIAL DEVELOPMENT

## Marriages and Divorces; Law and Order

Year	Marriages		Bank- ruptcies	Court Convictions		Police	
	Total	Rate(a)		Divorces (b)	Higher Courts(c)	Courts of Summary Juris- diction(d)	Active Strength
\$'000							
1841 .....	220	8.50		36	37		
1846 .....	189	2.84		16	40		
1851 .....	1 171	10.85		106	103		127
1856 .....	1 158	9.03		88	85	2 919	174
1861 .....	1 299	7.86		115	62	3 025	151
1866 .....	1 250	6.70		252	107	4 341	208
1871 .....	1 852	8.52		200	129	4 864	187
1876 .....	2 308	8.21		696	213	7 905	257
1881 .....	1 976	6.42	10	535	121	13 231	371
1886 .....	2 315	7.21		142	85	6 918	164
1891 .....	2 183	6.20		240	110	5 149	178
1896 .....	2 304	6.45		165	98	4 968	347
1901 .....	2 679	7.38		172	92	5 249	359
1911 .....	4 036	9.80	20	190	74	7 303	153
1916 .....	3 602	8.16	14	324	52	7 145	423
1921 .....	4 383	8.82	88	155	97	8 968	262
1926 .....	4 503	8.13	71	439	174	21 417	391
1931 .....	3 069	5.33	138	996	274	14 760	499
1936 .....	5 182	8.81	213	551	171	14 920	570
1941 .....	6 855	11.40	273	284	177	21 990	689
1946 .....	6 700	10.55	654	23	231	(e) 20 585	(e) 830
1947 .....	6 668	10.31	695	32	246	24 491	888
1948 .....	6 704	10.14	630	32	185	24 164	869
1949 .....	6 247	9.18	590	52	205	22 834	1 052
1950 .....	6 585	9.28	661	44	207	25 496	1 208
1951 .....	6 646	9.07	637	53	307	28 675	942
1952 .....	6 241	8.27	581	76	328	27 432	1 398
1953 .....	6 149	7.92	628	91	330	30 229	2 517
1954 .....	6 190	7.77	594	89	312	25 482	1 048
1955 .....	6 226	7.59	624	106	340	29 264	2 429
1956 .....	6 277	7.40	567	150	362	28 221	969
1957 .....	6 581	7.53	529	244	459	30 658	1 018
1958 .....	6 505	7.25	483	278	457	32 621	3 303
1959 .....	6 614	7.18	503	366	499	34 203	1 183
1960 .....	6 607	6.99	610	368	580	42 531	3 677
1961 .....	6 804	7.01	718	561	606	52 155	4 084
1962 .....	7 021	7.12	685	620	718	53 531	5 651
1963 .....	7 302	7.24	765	584	745	57 189	4 441
1964 .....	7 765	7.50	887	675	629	55 408	5 825
1965 .....	8 680	8.16	852	582	713	62 238	6 245
1966 .....	9 051	8.27	1 069	648	738	71 694	1 558
1967 .....	9 434	8.50	929	660	707	87 110	1 595
1968 .....	9 652	8.60	915	759	692	105 027	8 417
1969 .....	10 599	9.30	963	659	712	105 966	9 137
1970 .....	10 864	9.38	939	611	694	114 499	9 568
1971 .....	10 833	9.21	1 264	(f) 626	(f) 931	110 543	1 063
1972 .....	10 829	9.10	1 235	643	964	123 063	1 2181
1973 .....	10 806	9.01	1 582	554	982	(g) 94 068	1 063
1974 .....	10 769	8.84	1 561	373	906	93 037	2 167
1975 .....	9 843	7.95	1 812	437	989	104 402	1 777
1976 .....	10 902	8.64	(h) 6 142	351	1 080	95 758	2 264
1977 .....	10 126	7.93	4 419	456	1 075	105 224	1 334
1978 .....	9 800	7.61	3 805	673	1 258	105 413	1 845
1979 .....	9 778	7.55	n.y.a.	847	n.y.a.	3 093	53 456
							58 868

(a) Rate per 1 000 of mean population. (b) Dissolutions made absolute. (c) Distinct persons only. (d) Each type of offence counted separately when there are multiple charges against an individual. (e) Year ended 30 June from 1943. (f) Year ended 30 June from 1971. (g) Excludes juvenile offenders from 1973. (h) The Family Law Act 1975 repealing State legislation, came into operation throughout Australia in 1976.

## SOCIAL DEVELOPMENT

## Education

Year	Primary and Secondary						Tertiary		Further
	Government Schools (a)			Non-government Schools			Uni-versities (b)	Colleges of Advanced Education	Course Enrolments
	Students		No.	Students		No.		Students	
Year	No.	Primary	Secondary	No.	Primary	Secondary	Students (b)	Students	
1851 .....	115	3 031							
1856 .....	147	6 516							
1861 .....	219	10 711		236					
1866 .....	292	14 690		n.a.					
1871 .....	307	15 791		n.a.					
1876 .....	281	25 889		326				58	
1881 .....	405	36 888		363				74	
1886 .....	504	44 405		n.a.				197	
1891 .....	552	47 094		285				246	
1896 .....	639	59 944		232				320	
1901 .....	706	63 183		230				591	
1906 .....	708	57 270		215			(c) 9 753	626	
1911 .....	743	53 494	1 800	179			(c) 11 121	641	
1916 .....	857	63 935	3 047	(d) 218			(d) 12 785	491	
1921 .....	973	77 111	3 067	171			13 951	1 338	
1926 .....	1 019	79 204	6 527	188			16 139	1 575	
1931 .....	1 075	81 218	10 503	186			14 310	2 092	
1936 .....	1 100	75 411	9 280	174			13 993	2 025	
1941 .....	1 006	63 303	10 761	167			13 915	2 211	
1946 .....	811	61 242	11 870	145			16 310	3 723	
1947 .....	782	63 853	11 723	143			16 468	4 045	
1948 .....	773	66 653	11 550	142			17 169	4 266	
1949 .....	759	71 337	11 922	146			18 426	4 126	
1950 .....	743	76 369	12 732	148			19 655	4 069	
1951 .....	728	81 642	14 106	146			20 677	3 720	
1952 .....	716	89 630	15 121	146			22 393	3 612	
1953 .....	723	97 262	16 933	148			23 631	3 565	
1954 .....	716	105 022	17 972	157			24 949	3 555	
1955 .....	701	111 909	19 485	157			26 840	3 617	
1956 .....	699	118 365	22 134	163			29 050	3 828	
1957 .....	694	123 132	24 734	163			30 504	4 424	
1958 .....	674	125 678	28 189	161			32 425	4 816	
1959 .....	668	129 850	33 042	162			33 896	5 300	
1960 .....	681	132 372	37 901	163			35 370	5 723	
1961 .....	688	135 274	41 889	165			35 652	6 250	
1962 .....	682	136 924	46 499	164	(e) 24 962		(e) 11 440	6 824	
1963 .....	682	140 520	49 637	166	24 677		12 354	7 416	
1964 .....	685	145 042	54 026	170	24 761		12 890	8 203	
1965 .....	700	150 809	57 811	172	24 605		13 007	8 658	
1966 .....	700	154 253	60 834	172	24 188		12 999	9 364	
1967 .....	674	157 424	65 630	173	23 533		13 469	9 658	
1968 .....	683	157 997	68 814	171	22 814		13 599	9 803	
1969 .....	676	159 682	71 599	171	22 257		14 203	10 128	3 420
1970 .....	681	156 922	71 866	170	22 464		14 642	10 176	3 443
1971 .....	662	156 458	74 982	169	22 669		15 018	10 682	4 242
1972 .....	(f) 615	154 886	77 926	163	22 232		15 233	11 124	(g) 4 291
1973 .....	614	152 698	79 088	163	21 929		15 806	11 497	6 662
1974 .....	613	152 901	79 578	157	22 399		16 494	12 264	12 163
1975 .....	619	151 975	82 737	151	22 479		16 818	12 876	13 773
1976 .....	625	151 499	82 115	147	22 177		17 122	13 493	14 560
1977 .....	626	152 079	81 131	145	22 361		17 085	13 390	15 168
1978 .....	628	149 964	80 491	151	22 353		17 088	12 904	15 996
1979 .....	632	146 793	77 732	155	22 591		17 381	12 840	16 042
									n.y.a.

(a) Net enrolment to 1969, thereafter at census date (at or about 1 August). Includes Northern Territory before 1958. (b) Excludes students at Conservatorium of Music not also enrolled for degree or diploma subject. (c) On last school day. (d) Non-government schools compulsorily registered, previous years incomplete. From 1916 to 1961 net enrolment including Northern Territory. (e) From 1962 at census date (at or about 1 August). Excludes Northern Territory. (f) From 1972 includes only primary and secondary, before 1972 included technical institutions. (g) In approved courses at colleges of advanced education.

## SOCIAL DEVELOPMENT

## Health

Year	Recognised Hospitals			Mental Hospitals(a)		Medical Practitioners Registered	General Nurses Registered		
	Number of Hospitals	Patients Treated	Revenue		Patients at end of Year				
			State Govt Aid	Total	Admissions During Year				
\$'000									
1846 .....	1	413		10	6	22			
1851 .....	1	559		9	11	68			
1856 .....	1	795		69	73	101			
1861 .....				68	167	111			
1866 .....	1	1 257		88	224	85			
1871 .....	1	1 433		111	324	77			
1876 .....	1	2 282		149	427	94			
1881 .....	1	2 258		199	606	113			
1886 .....	1	2 022		207	744	152			
1891 .....	1	2 301		224	815	177			
1896 .....	1	2 633		195	934	279			
1901 .....	1	3 554		214	988	341			
1906 .....	9	4 476		231	994	242			
1911 .....	21	8 547	96	132	273	1 084	299		
1916 .....	27	12 453	130	186	302	1 158	326		
1921 .....	31	15 642	254	397	272	1 190	360		
1926 .....	45	22 438	467	730	249	1 282	445		
1931 .....	51	26 505	356	574	250	1 395	457		
1936 .....	52	34 014	383	730	272	1 627	477		
1941 .....	55	40 593	607	1 063	247	1 905	814		
1942 .....	55	40 137	625	1 200	219	1 892	839		
1943 .....	57	41 620	642	1 301	197	1 889	846		
1944 .....	58	43 582	462	1 479	276	1 925	866		
1945 .....	(b)	(b)	(b)	(b)	(b)	(b)	883		
1946 .....	58	46 696	836	1 697	302	2 024	947		
1947 .....	59	52 388	1 135	2 133	332	2 107	983		
1948 .....	59	50 480	1 382	2 476	330	2 165	1 012		
1949 .....	60	53 558	1 671	3 065	398	2 213	1 053		
1950 .....	59	54 334	2 109	3 719	379	2 310	1 111		
1951 .....	60	57 401	2 694	4 503	452	2 411	1 172		
1952 .....	61	59 374	3 739	6 110	426	2 425	1 244		
1953 .....	62	61 681	4 673	7 442	498	2 534	1 202		
1954 .....	62	62 138	4 340	7 386	548	2 644	1 265		
1955 .....	63	64 310	5 524	8 819	516	2 612	1 348		
1956 .....	65	69 295	8 214	11 702	553	2 658	1 395		
1957 .....	65	73 249	11 370	15 449	543	2 594	1 469		
1958 .....	64	75 282	10 425	15 372	659	2 667	1 507		
1959 .....	65	79 426	10 260	15 638	712	2 643	1 601		
1960 .....	65	82 948	10 474	16 829	1 637	2 810	1 681		
1961 .....	66	87 386	10 155	17 414	1 846	2 833	1 739		
1962 .....	65	89 409	10 366	18 350	1 925	2 914	1 821		
1963 .....	65	94 144	10 007	19 307	2 604	2 799	1 883		
1964 .....	65	99 491	12 094	21 166	3 132	2 838	2 002		
1965 .....	65	105 098	14 171	24 084	3 061	2 752	2 080		
1966 .....	67	111 313	19 681	30 386	2 810	2 646	2 175		
1967 .....	65	117 693	22 138	34 532	2 866	2 497	2 282		
1968 .....	65	122 835	16 626	31 039	2 733	2 465	2 372		
1969 .....	65	132 864	21 364	37 064	2 964	2 283	2 474		
1970 .....	66	135 433	23 198	41 500	3 378	2 269	2 568		
1971 .....	67	135 927	32 971	53 942	3 527	2 193	2 707		
1972 .....	68	147 058	29 671	53 750	3 602	2 159	3 054		
1973 .....	69	158 261	37 951	64 633	3 225	2 208	3 154		
1974 .....	70	164 797	53 893	85 255	3 309	2 123	3 348		
1975 .....	71	168 832	82 194	124 930	3 410	2 074	3 767		
1976 .....	73	179 733	70 730	158 278	3 665	1 769	4 531		
1977 .....	81	190 806	87 294	206 060	3 489	1 766	4 574		
1978 .....	81	202 802	102 450	247 859	n.y.a.	n.y.a.	4 783		
1979 .....	81	216 315	107 401	263 490	n.y.a.	n.y.a.	n.y.a.		

(a) From 1959-60 covers all in-patients (certified and voluntary) in institutions. Before this covered only certified patients in two 'long-term' institutions. (b) Year ended 30 June from 1946.

## STATISTICAL SUMMARY

## SOCIAL DEVELOPMENT

## Social Welfare

Year	Pensions and Benefits Paid in South Australia by Commonwealth Government					Pensioners	
	Age and Invalid Pensions	Disability and Service Pensions (a)	Family Allowance (b)	National Health Services	Total (Includes Other)	Age and Invalid	Disability and Service (a)
\$'000							
1915-16 .....	544	20				10 993	794
1920-21 .....	910	1 028			2 060	12 320	14 663
1925-26 .....	1 404	978			2 496	14 098	16 144
1930-31 .....	1 982	994			3 074	20 602	16 653
1931-32 .....	1 878	908			2 848	21 897	15 801
1932-33 .....	1 826	844			2 726	21 461	15 517
1933-34 .....	1 896	854			2 804	22 805	15 352
1934-35 .....	2 068	892			3 016	24 517	15 248
1935-36 .....	2 298	942			3 298	26 134	15 997
1936-37 .....	2 522	1 036			3 622	27 308	16 340
1937-38 .....	2 868	1 076			4 010	28 039	16 865
1938-39 .....	2 836	1 098			4 008	28 857	16 680
1939-40 .....	2 908	1 104			4 086	29 521	16 145
1940-41 .....	3 032	1 088			4 192	29 642	15 424
1941-42 .....	3 274	1 108	1 720		6 162	28 422	15 296
1942-43 .....	3 628	1 274	1 810		7 076	27 423	16 333
1943-44 .....	3 688	1 654	1 908		8 076	27 530	18 472
1944-45 .....	3 624	1 838	1 870		8 276	27 507	22 071
1945-46 .....	4 670	2 272	2 854	244	11 262	29 512	30 687
1946-47 .....	5 102	2 692	3 196	856	13 212	32 387	35 117
1947-48 .....	6 284	3 046	3 212	770	14 708	34 229	38 505
1948-49 .....	7 170	3 718	4 024	1 054	17 442	35 470	42 931
1949-50 .....	7 888	4 178	4 938	1 220	19 966	36 524	47 303
1950-51 .....	8 600	5 214	7 564	2 122	25 216	36 582	51 589
1951-52 .....	10 360	6 442	8 298	3 554	30 522	37 363	54 758
1952-53 .....	12 616	7 130	9 540	4 154	25 878	39 700	58 591
1953-54 .....	14 150	7 686	9 154	4 880	38 202	42 216	61 039
1954-55 .....	15 310	8 778	9 428	5 824	41 560	45 147	63 767
1955-56 .....	17 718	9 074	10 998	6 140	46 322	47 754	66 535
1956-57 .....	19 244	9 575	10 500	6 710	48 926	50 209	68 291
1957-58 .....	21 432	10 664	10 860	7 704	54 256	52 699	69 852
1958-59 .....	23 150	10 860	12 618	9 868	60 460	55 181	71 331
1959-60 .....	26 366	12 697	11 794	11 977	66 157	57 336	72 013
1960-61 .....	28 537	13 722	14 092	12 811	73 594	60 483	72 695
1961-62 .....	32 844	14 241	12 671	14 567	80 283	64 374	74 454
1962-63 .....	33 951	14 867	12 861	16 066	83 393	64 156	73 239
1963-64 .....	36 120	16 224	15 916	17 080	91 514	65 573	72 518
1964-65 .....	38 509	16 006	16 563	18 948	96 362	66 798	70 678
1965-66 .....	39 691	17 692	16 988	21 254	102 661	67 999	68 439
1966-67 .....	43 720	16 776	19 063	23 100	111 394	70 521	66 624
1967-68 .....	46 711	17 252	17 835	25 448	116 625	74 016	65 078
1968-69 .....	50 828	19 065	18 162	28 411	128 940	76 616	62 986
1969-70 .....	58 720	19 435	20 287	33 476	145 857	85 076	61 928
1970-71 .....	64 714	20 405	18 284	41 773	161 687	88 936	60 406
1971-72 .....	76 545	22 493	19 766	50 587	189 255	92 771	58 682
1972-73 .....	101 625	25 917	22 780	57 851	236 747	104 350	59 707
1973-74 .....	131 771	31 350	20 098	66 005	291 823	116 117	59 522
1974-75 .....	184 218	41 774	20 237	82 399	400 590	123 627	59 130
1975-76 .....	234 266	49 377	22 896	223 151	632 412	130 229	59 536
1976-77 .....	273 814	59 709	87 491	177 894	722 242	136 473	60 492
1977-78 .....	333 579	72 018	90 483	204 412	871 650	141 941	61 642
1978-79 .....	374 344	78 219	84 100	197 366	n.a.	146 860	62 505

(a) From 1974-75, war pensions known as disability pensions.

(b) Family allowance known as child endowment before 1975-76.

## EMPLOYMENT AND UNEMPLOYMENT

Year	Civilian Employees (a)		Factory Employment (b)		Rural Employment (c)		Unemployed (d)		
			Males	Females	Males	Females	Number	Rate (e)	
	Males	Females							
	'000								
1911 .....			22.6	5.3					Per cent
1925-26 .....			33.1	6.9	38.8	3.2			
1930-31 .....			19.3	4.6	38.9	2.6			
1935-36 .....			31.4	7.1	41.7	2.6			
1936-37 .....			33.4	7.3	42.3	3.0			
1937-38 .....			36.3	7.8	41.4	2.9			
1938-39 .....			35.4	8.0	41.3	2.5			
1939-40 .....			36.3	8.7	38.7	2.8			
1940-41 .....			40.1	10.8	n.a.	n.a.			
1941-42 .....			49.9	15.3	n.a.	n.a.			
1942-43 .....			52.8	20.0	29.6	5.1			
1943-44 .....			50.7	18.9	32.9	6.5			
1944-45 .....			49.1	16.4	33.6	6.2			
1945-46 .....			49.5	13.7	35.7	5.5			
1946-47 .....			56.7	14.0	38.1	5.0			
1947-48 .....			59.1	14.3	38.1	5.8			
1948-49 .....			60.9	14.9	38.1	5.5			
1949-50 .....			63.1	15.3	38.6	7.0			
1950-51 .....			66.8	16.2	36.9	6.1			
1951-52 .....			68.0	15.9	37.4	4.7			
1952-53 .....			67.1	13.4	38.3	5.0			
1953-54 .....	178.6	55.7	70.7	14.8	37.8	5.6			
1954-55 .....	183.9	60.1	73.7	15.9	37.6	5.0			
1955-56 .....	194.0	64.0	76.1	16.4	37.3	4.7			
1956-57 .....	193.3	64.1	75.5	16.4	36.4	3.9			
1957-58 .....	194.4	65.9	75.9	16.6	35.2	2.7			
1958-59 .....	201.1	68.4	77.4	16.7	35.0	3.6			
1959-60 .....	206.4	72.6	81.3	17.7	33.8	2.6			
1960-61 .....	207.5	72.3	81.9	18.1	34.0	2.3			
1961-62 .....	211.2	76.7	81.8	17.3	33.7	2.1			
1962-63 .....	219.6	80.9	86.7	18.6	33.3	1.9			
1963-64 .....	229.4	86.0	90.9	19.9	33.2	1.4			
1964-65 .....	239.9	93.4	94.7	21.5	32.6	1.3			
1965-66 .....	(f) 248.0	(f) 113.3	96.2	22.1	32.1	1.0			
1966-67 .....	251.1	117.3	96.1	22.1	31.3	0.8	5.3	7.0	2.6
1967-68 .....	259.4	123.8	98.9	22.5	29.7	0.7	4.9	6.4	2.4
1968-69 .....	266.9	129.4	(g) 91.0	(g) 22.1	29.4	0.6	4.9	6.2	2.3
1969-70 .....	272.2	138.1	94.6	23.8	28.9	0.6	3.4	5.4	1.8
1970-71 .....	277.3	144.7	n.a.	n.a.	28.2	0.5	4.0	5.0	1.8
1971-72 .....	277.0	148.2	96.2	25.4	27.3	0.5	5.1	7.9	2.5
1972-73 .....	284.3	158.0	95.6	25.8	27.1	0.4	7.5	9.6	3.2
1973-74 .....	292.9	173.9	98.7	29.4	26.6	0.4	5.3	8.4	2.5
1974-75 .....	293.1	172.3	(h) 94.3	(h) 27.0	26.6	0.3	5.8	10.0	2.8
1975-76 .....	293.8	179.9	90.3	25.8	n.a.	n.a.	11.5	17.0	4.9
1976-77 .....	290.3	180.9	89.2	25.0	n.a.	n.a.	11.0	13.7	4.2
1977-78 .....	280.3	179.3	87.3	24.6	n.a.	n.a.	24.3	16.6	6.8
1978-79 .....	280.9	180.0	n.y.a.	n.y.a.	n.a.	n.a.	23.9	20.6	7.5

(a) At June; excludes employees in agriculture, defence forces and private domestic service. (b) Average employment including working proprietors during the year. (c) Permanent employees only. (d) From Labour Force Surveys for June from 1978; for August in earlier years. (e) Unemployment rate is the number unemployed as a proportion of the number in the labour force. (f) From June 1966 a new definition of Labour Force (affecting mainly females) was adopted. (g) Direct comparisons with figures for previous years are not possible because of changes in the scope of the census and in the census units. (h) From 1974-75 excludes single establishment enterprises employing fewer than four persons.

## WAGES

Year	State Living Wage (a)		Federal Basic and Minimum Wage Rates (a) (d)		Minimum Weekly Wage Rates (b)	
	Males	Females	Males	Females	Males	Females
Dollars						
1911 .....			5.10			
1916 .....	5.40		6.15		5.90	2.48
1921 .....	7.95	3.50	7.95		8.94	4.52
1926 .....	8.55	3.95	8.55		9.57	5.00
1931 .....	6.30	3.15	5.81		7.50	4.39
1932 .....	6.30	3.15	5.72		7.26	4.09
1933 .....	6.30	3.15	5.96		7.34	4.10
1934 .....	6.30	3.15	6.30		7.55	4.19
1935 .....	6.60	3.15	6.70		7.79	4.24
1936 .....	6.60	3.30	6.90		7.95	4.33
1937 .....	7.40	3.65	7.40		8.58	4.68
1938 .....	7.40	3.65	7.60		8.71	4.78
1939 .....	7.80	3.80	7.70		9.41	4.96
1940 .....	8.40	4.10	8.00		9.85	5.21
1941 .....	8.70	4.35	8.40		10.58	5.54
1942 .....	9.40	4.62	9.30		11.50	6.02
1943 .....	9.40	4.62	9.40		11.61	6.12
1944 .....	9.40	4.62	9.30		11.58	6.53
1945 .....	9.40	4.62	9.30		11.60	6.72
1946 .....	9.85	5.50	10.20		12.41	7.60
1947 .....	10.60	5.90	10.60		13.78	8.80
1948 .....	11.70	6.65	11.60		15.22	9.51
1949 .....	12.50	6.85	12.60		16.44	10.10
1950 .....	15.80	11.85	15.80	11.85	19.79	14.21
1951 .....	19.50	14.60	19.50	14.60	23.60	17.02
1952 .....	22.90	17.15	22.90	17.15	27.08	19.68
1953 .....	23.10	17.30	23.10	17.30	27.35	19.91
1954 .....	23.10	17.30	23.10	17.30	28.16	19.99
1955 .....	23.10	17.30	23.10	17.30	28.50	20.18
1956 .....	24.10	18.05	24.10	18.05	29.63	20.92
1957 .....	25.10	18.80	25.10	18.80	30.69	21.95
1958 .....	25.60	19.20	25.60	19.20	31.24	22.38
1959 .....	27.10	20.30	27.10	20.30	33.99	23.92
1960 .....	27.10	20.30	27.10	20.30	34.22	24.29
1961 .....	28.30	21.20	28.30	21.20	35.46	25.20
1962 .....	28.30	21.20	28.30	21.20	35.65	25.23
1963 .....	28.30	21.20	28.30	21.20	36.40	25.52
1964 .....	30.30	22.70	30.30	22.70	38.69	27.29
1965 .....	30.30	22.70	30.30	22.70	39.48	27.75
1966 .....	32.30	24.20	32.30	24.20	41.75	29.42
1967 .....	33.30	25.20	(c) 37.05		43.79	31.32
1968 .....	34.65	26.55	38.40		48.23	33.60
1969 .....	(d) 34.65	(d) 26.55	41.90		50.76	35.94
1970 .....	(d) 34.65	(d) 26.55	41.90		52.12	37.51
1971 .....	37.85	29.00	45.90		59.38	44.16
1972 .....	39.85	31.00	50.60		65.82	50.50
1973 .....	43.15	34.10	59.60		75.20	62.11
1974 .....	46.50	37.30	67.60	(e) 60.80	103.32	91.47
1975 .....	(f)	(f)	82.40		115.13	103.34
1976 .....	(f)	(f)	100.20		132.20	125.62
1977 .....	(f)	(f)	111.80		145.69	139.06
1978 .....	(f)	(f)	119.60		158.37	149.13
1979 .....	(f)	(f)	123.40		165.30	154.45

(a) At end of year. (b) Adult rates, at end of year, for all industries excluding rural. (c) Provisions for minimum wages (for adult males only) were inserted in Commonwealth Awards in July 1966 and basic wages were replaced by the total wage concept in July 1967. (d) An economic loading of 3 per cent of the sum of the living wage plus margin was added to all award rates of pay from December 1969 to January 1971. (e) Between May 1974 and June 1975 the minimum wage for adult males was extended to adult females in three steps. (f) Increased to \$48.20 and \$38.60 for males and females respectively from May 1975 and abolished in September 1975, award rates thereafter being specified as total wages.

## PRICES

Year	Retail Price Indexes: Adelaide						Agricultural Produce at Principal Markets		
	'C' Series (a)			Consumer (b)			Wheat (per tonne) (c)	Barley (per tonne)	Wool (per kg)
	Food and Groceries	Rent	All Groups	Food	Housing	All Groups			
							\$	Cents	
1901 .....	575								
1906 .....	549								
1911 .....	570						12.71	16.53	15.59
1916 .....	835	573	798				17.45	14.33	19.78
1921 .....	941	819	989				29.39	19.49	24.74
1926 .....	1 045	927	1 026				22.82	17.64	27.45
1931 .....	789	755	837				8.41	9.92	12.52
1932 .....	761	691	802				11.65	13.05	12.63
1933 .....	731	694	789				10.33	9.83	13.45
1934 .....	767	700	806				9.66	10.67	25.07
1935 .....	780	736	820				11.17	11.95	15.04
1936 .....	798	795	839				14.07	9.83	21.89
1937 .....	826	832	859				18.92	17.90	25.09
1938 .....	861	868	888				13.08	15.52	20.72
1939 .....	897	888	906				8.34	11.95	16.71
1940 .....	900	892	936				14.92	15.61	21.94
1941 .....	905	893	988				16.42	21.43	21.76
1942 .....	1 046	893	1 075				16.76	14.64	21.58
1943 .....	1 003	893	1 102				19.51	19.84	25.07
1944 .....	993	892	1 098				22.71	19.05	24.96
1945 .....	1 002	892	1 102				20.69	24.07	24.71
1946 .....	1 006	894	1 120				29.47	27.91	24.78
1947 .....	1 067	897	1 165				36.49	39.33	40.50
1948 .....	1 230	903	1 277				56.70	74.30	65.92
1949 .....	1 351	912	1 393	38.6	38.4	45.0	45.64	36.95	81.09
1950 .....	1 494	929	1 521	41.7	40.0	48.4	52.98	49.69	106.13
1951 .....	1 931	949	1 833	48.2	42.5	54.6	53.76	51.54	237.28
1952 .....	2 380	1 055	2 159	62.5	47.6	66.8	60.63	71.74	118.54
1953 .....	2 444	1 155	2 246	68.7	55.9	73.1	61.77	71.12	137.74
1954 .....	2 525	1 174	2 277	71.2	61.5	74.7	53.35	44.84	138.18
1955 .....	2 657	1 247	2 354	72.9	63.2	75.6	49.05	59.97	120.66
1956 .....	2 871	1 358	2 466	76.2	67.6	78.1	49.60	46.74	103.57
1957 .....	2 710	1 468	2 463	78.9	72.3	81.2	53.28	48.50	135.63
1958 .....	2 768	1 592	2 536	76.9	74.9	81.8	53.50	52.38	103.09
1959 .....	2 998	1 674	2 647	80.7	76.7	83.6	51.51	49.43	83.84
1960 .....				84.6	78.3	86.2	53.83	44.53	98.88
1961 .....				90.9	83.2	89.8	55.37	40.39	88.49
1962 .....				87.7	85.9	89.5	55.70	49.43	91.69
1963 .....				86.6	86.7	89.1	53.94	48.94	98.92
1964 .....				88.8	88.7	90.2	52.65	49.12	119.53
1965 .....				93.9	92.1	93.9	51.88	50.84	97.31
1966 .....				97.1	95.7	97.0	55.15	51.85	102.98
1967 .....				100.0	100.0	100.0	54.67	52.56	99.69
1968 .....				104.7	102.1	102.9	58.86	52.47	82.87
1969 .....				106.4	104.7	105.3	50.01	41.09	91.76
1970 .....	Not calculated			107.1	109.3	108.2	51.88	36.82	75.02
1971 .....				109.5	115.9	112.5	52.98	49.21	59.74
1972 .....				113.6	124.4	119.2	55.26	40.96	72.21
1973 .....				123.1	133.3	126.5	56.09	59.30	178.07
1974 .....				148.3	150.6	143.9	103.20	87.59	176.54
1975 .....				163.7	185.3	169.7	111.21	106.11	120.12
1976 .....				180.6	222.1	190.5	104.46	98.14	134.46
1977 .....				205.8	253.8	220.1	90.36	106.52	173.39
1978 .....				229.7	275.1	241.8	100.91	90.06	179.03
1979 .....				253.0	288.6	259.7	127.01	81.69	193.65

(a) Base: Average all groups six capital cities 1923 to 1927 = 1 000.

(b) Base of each group 1966-67 = 100.0. Index numbers are for year ended 30 June in the year stated.

(c) Bulk wheat from 1962, previously bagged.

## METEOROLOGY, ADELAIDE

Year	Rainfall		Evapora-tion Total	Sunshine Total	Temperature		
	Days of Rain	Total			Extreme Maximum	Extreme Minimum	Mean
1841 .....	93	456	mm	mm	Hours		°C
1846 .....	114	683					
1851 .....	128	786					
1856 .....	118	633					
1861 .....	147	611			42.8	1.7	17.4
1866 .....	116	511			43.1	2.9	17.7
1871 .....	137	591	1 345		44.1	3.0	17.8
1876 .....	110	341	1 548		45.7	0.3	16.9
1881 .....	135	458	1 422		41.0	1.8	16.7
1886 .....	141	366	1 421	2 588	44.7	2.0	17.1
1891 .....	113	356	1 322	2 753	39.3	2.3	16.8
1896 .....	121	385	1 337	2 644	44.0	1.3	17.4
1901 .....	124	457	1 494	2 523	43.3	1.8	17.5
1906 .....	127	674	1 400	2 366	45.1	2.3	17.6
1911 .....	127	407	1 233	2 415	39.3	1.6	17.2
1916 .....	142	715	1 411	2 512	41.9	3.5	16.7
1921 .....	100	575	1 478	2 658	43.1	2.8	18.2
1926 .....	116	564	1 473	2 689	40.1	3.0	17.3
1931 .....	145	565	1 517	2 534	45.9	3.1	16.8
1936 .....	123	491	1 525	2 431	39.8	2.8	17.1
1941 .....	126	573	1 604	2 472	43.3	3.3	16.9
1942 .....	133	646	1 674	2 422	44.7	3.4	17.3
1943 .....	135	453	1 595	2 417	44.6	2.7	16.4
1944 .....	114	435	1 633	2 334	39.7	0.3	16.8
1945 .....	105	453	1 523	2 431	41.7	1.1	16.7
1946 .....	135	574	1 385	2 301	41.3	2.0	16.3
1947 .....	145	556	1 573	2 311	40.7	3.3	16.9
1948 .....	122	544	1 622	2 402	43.4	2.9	16.3
1949 .....	119	463	1 492	2 318	38.0	2.6	15.8
1950 .....	91	408	1 657	2 678	40.0	3.6	17.0
1951 .....	135	646	1 645	2 339	40.5	2.6	16.9
1952 .....	128	508	1 523	2 459	40.8	1.6	15.8
1953 .....	121	508	1 712	2 585	41.3	3.9	16.6
1954 .....	109	425	1 680	2 503	39.4	3.4	16.7
1955 .....	134	624	1 677	2 396	42.8	3.6	16.7
1956 .....	154	692	1 638	2 379	38.3	4.1	16.4
1957 .....	110	424	1 736	2 673	40.9	3.4	16.8
1958 .....	121	446	1 672	2 455	39.0	1.2	16.4
1959 .....	88	288	1 750	2 592	43.3	3.1	17.3
1960 .....	129	586	1 606	2 356	41.8	2.4	16.3
1961 .....	122	379	n.a.	2 586	40.8	2.9	17.8
1962 .....	125	456	n.a.	2 559	42.7	4.2	17.2
1963 .....	118	621	1 620	2 369	39.9	3.3	17.0
1964 .....	135	556	1 507	2 200	40.3	2.3	16.3
1965 .....	111	339	1 648	2 439	38.8	2.6	17.3
1966 .....	123	495	1 612	2 432	40.7	3.3	16.9
1967 .....	89	257	1 939	2 841	39.0	3.9	17.3
1968 .....	141	653	1 870	2 410	43.1	2.2	17.0
1969 .....	112	525	1 783	2 665	41.1	3.9	16.7
1970 .....	149	483	1 866	2 658	40.5	2.9	16.6
1971 .....	147	672	1 813	2 624	39.6	4.2	17.1
1972 .....	106	446	1 947	2 967	39.6	2.3	17.3
1973 .....	129	675	1 740	2 686	40.5	3.7	17.7
1974 .....	136	639	1 561	2 584	36.9	3.6	17.2
1975 .....	142	522	1 635	2 596	41.2	3.8	17.4
1976 .....	110	366	1 636	2 831	40.5	3.3	16.7
1977 .....	117	400	1 665	2 876	40.3	3.6	17.2
1978 (a) .....	127	588	1 533	2 723	39.3	2.2	16.4
1979 .....	137	661	1 557	2 702	42.0	3.0	17.2

(a) Recorded at Bureau of Meteorology, Kent Town from 1978.

## RURAL PRODUCTION

## Land Cultivation

Year	Rural Establishments	Area of Rural Establishments	Area under Crop		Area of Pastures Top-dressed	Area Under Irrigation		
			Fertilised	Total				
	No.		'000 hectares					
1841-42 .....				3				
1846-47 .....				14				
1851-52 .....				33				
1856-57 .....				82				
1861-62 .....				162				
1866-67 .....				245				
1871-72 .....				339				
1876-77 .....				497				
1881-82 .....				873				
1886-87 .....				925				
1891-92 .....				780				
1896-97 .....				830				
1901-02 .....			335	905				
1906-07 .....			629	873				
1911-12 .....	27 120	47 012	1 010	1 200				
1916-17 .....	29 278	52 475	1 156	1 468				
1921-22 .....	29 693	54 311	1 197	1 367		9.1		
1926-27 .....	29 654	54 867	1 430	1 572	66	14.3		
1931-32 .....	30 648	52 354	1 705	2 112	56	17.3		
1936-37 .....	31 321	55 433	1 619	1 853	366	17.1		
1941-42 .....	30 565	58 936	1 409	1 609	427	18.5		
1942-43 .....	27 934	58 859	1 062	1 391	382	n.a.		
1943-44 .....	27 826	58 488	789	1 117	285	n.a.		
1944-45 .....	27 867	55 639	926	1 287	293	n.a.		
1945-46 .....	27 635	57 670	1 228	1 548	346	17.1		
1946-47 .....	28 040	59 154	1 366	1 572	450	18.7		
1947-48 .....	27 597	57 624	1 367	1 559	563	17.2		
1948-49 .....	28 110	59 377	1 327	1 521	705	19.5		
1949-50 .....	27 900	59 312	1 263	1 464	725	19.9		
1950-51 .....	28 248	61 403	1 316	1 488	753	32.0		
1951-52 .....	28 698	61 425	1 284	1 496	870	23.6		
1952-53 .....	28 860	61 791	1 270	1 449	940	23.1		
1953-54 .....	29 220	60 830	1 350	1 529	1 144	25.1		
1954-55 .....	28 092	60 452	1 404	1 576	1 272	28.1		
1955-56 .....	28 585	60 689	1 378	1 607	1 416	28.7		
1956-57 .....	27 936	60 675	1 376	1 610	1 488	26.7		
1957-58 .....	27 971	61 530	1 401	1 581	1 621	32.9		
1958-59 .....	28 105	61 639	1 494	1 679	1 504	34.4		
1959-60 .....	28 527	62 903	1 489	1 643	1 405	40.8		
1960-61 .....	28 711	63 316	1 751	2 010	1 335	41.3		
1961-62 .....	28 886	63 494	1 644	1 825	1 450	43.9		
1962-63 .....	28 922	63 413	1 787	1 996	1 518	45.6		
1963-64 .....	28 711	64 307	1 938	2 177	1 616	47.7		
1964-65 .....	28 754	63 517	1 932	2 141	1 908	49.8		
1965-66 .....	28 759	64 505	1 971	2 142	2 061	52.1		
1966-67 .....	28 957	65 361	2 073	2 322	2 119	56.2		
1967-68 .....	29 058	65 059	2 037	2 270	2 076	70.1		
1968-69 .....	29 137	65 603	2 431	2 783	1 728	70.4		
1969-70 .....	29 035	65 839	2 138	2 407	2 008	75.3		
1970-71 .....	29 087	65 795	1 884	2 141	1 938	77.3		
1971-72 .....	29 095	65 146	2 113	2 478	1 822	76.1		
1972-73 .....	29 001	65 372	1 864	2 084	2 033	83.1		
1973-74 .....	28 738	64 843	2 146	2 451	2 425	80.2		
1974-75 .....	28 185	63 825	1 986	2 257	2 138	78.9		
1975-76 .....	(a) 25 143	63 577	1 821	2 116	1 133	77.9		
1976-77 .....	(a) 21 597	63 052	1 785	2 036	1 408	n.a.		
1977-78 .....	21 909	62 494	2 309	2 565	1 607	n.a.		
1978-79 .....	22 022	62 655	2 596	2 827	1 614	78.4		

(a) Change in scope of the Agricultural Census. See Part 9.1.

## RURAL PRODUCTION

## Crop Areas and Yields

Year	Cereals for Grain						Hay (a)	Orchards (b) (c)	Vineyards (b)			
	Wheat		Barley		Oats							
	Area '000 hectares	Yield per Hectare Tonnes	Area '000 hectares	Yield per Hectare Tonnes	Area '000 hectares	Yield per Hectare Tonnes						
'000 hectares												
1841-42 .....	2	1.40	—	1.12	—	1.12						
1846-47 .....	11	1.34	1	1.68	1	0.90						
1851-52 .....	22	0.85	2	0.92	1	0.98			0.1			
1856-57 .....	66	1.68	3	1.19	1	0.90	9	0.4	0.3			
1861-62 .....	126	0.74	4	0.89	1	0.91	25	0.7	1.6			
1866-67 .....	186	0.96	5	1.13	2	1.00	45	0.9	2.6			
1871-72 .....	280	0.39	7	0.53	2	0.49	40	1.1	2.2			
1876-77 .....	439	0.36	4	0.60	1	0.48	37	1.3	1.8			
1881-82 .....	716	0.31	5	0.64	1	0.48	135	1.8	1.7			
1886-87(d) ...	797	0.37	7	0.73	3	0.56	128	n.a.	2.1			
1891-92 .....	628	0.28	5	0.52	5	0.29	123	3.6	5.0			
1896-97 .....	685	0.11	6	0.42	16	0.21	137	4.8	7.4			
1901-02 .....	706	0.31	6	0.88	14	0.61	150	6.6	8.4			
1906-07 .....	683	0.70	11	0.98	23	0.70	121	7.4	9.1			
1911-12 .....	887	0.62	17	0.97	44	0.56	211	9.4	9.7			
1916-17 .....	1 124	1.11	42	0.94	61	0.54	196	11.7	11.8			
1921-22 .....	965	0.70	69	1.08	51	0.46	226	13.1	16.8			
1926-27 .....	1 120	0.86	104	1.01	62	0.50	201	12.8	20.3			
1931-32 .....	1 648	0.79	98	1.06	84	0.50	218	11.8	21.2			
1936-37 .....	1 238	0.63	123	0.78	168	0.26	218	12.0	22.7			
1941-42 .....	941	0.88	194	1.37	118	0.58	226	12.0	23.5			
1946-47 .....	1 019	0.75	203	0.94	102	0.49	133	11.4	23.6			
1947-48 .....	961	0.92	228	1.53	125	0.78	120	11.5	23.8			
1948-49 .....	835	0.85	282	0.97	116	0.41	95	12.0	24.2			
1949-50 .....	767	1.01	281	1.03	106	0.59	119	10.9	24.4			
1950-51 .....	748	1.13	310	1.23	110	0.58	106	11.6	25.1			
1951-52 .....	653	1.14	337	1.13	157	0.63	104	11.9	24.8			
1952-53 .....	648	1.48	379	1.55	150	0.81	87	11.6	24.5			
1953-54 .....	619	1.34	454	1.42	113	0.69	106	12.0	25.1			
1954-55 .....	687	1.25	413	1.01	138	0.60	104	12.3	24.5			
1955-56 .....	651	1.21	422	1.32	172	0.77	132	13.4	24.2			
1956-57 .....	582	1.47	494	1.56	173	0.87	121	13.8	23.2			
1957-58 .....	539	0.75	490	0.81	173	0.36	118	14.3	23.2			
1958-59 .....	570	1.53	539	1.58	195	1.12	170	15.1	23.0			
1959-60 .....	627	0.52	522	0.52	205	0.22	99	15.1	23.0			
1960-61 .....	797	1.58	630	1.52	207	1.00	159	15.3	23.0			
1961-62 .....	902	1.02	514	0.94	131	0.61	84	15.6	23.4			
1962-63 .....	1 050	0.99	426	0.96	168	0.62	116	16.4	23.6			
1963-64 .....	1 134	1.30	455	1.21	203	0.82	145	16.9	23.7			
1964-65 .....	1 104	1.30	443	1.38	180	0.91	127	17.4	23.8			
1965-66 .....	1 111	0.98	444	0.94	184	0.55	121	17.8	23.8			
1966-67 .....	1 198	1.22	448	1.20	206	0.91	195	17.9	23.1			
1967-68 .....	1 159	0.63	468	0.60	212	0.28	174	18.3	23.5			
1968-69 .....	1 517	1.49	572	1.17	209	1.03	249	18.0	24.5			
1969-70 .....	1 299	1.24	560	1.23	150	0.80	155	18.1	26.2			
1970-71 .....	802	0.98	693	1.07	195	0.78	196	18.3	27.7			
1971-72 .....	1 069	1.32	784	1.34	169	0.98	245	17.2	28.8			
1972-73 .....	986	0.83	692	0.74	142	0.52	210	16.7	29.5			
1973-74 .....	1 432	1.25	627	1.26	152	0.93	268	16.9	29.6			
1974-75 .....	1 220	1.22	701	1.62	135	0.83	190	16.6	30.4			
1975-76 .....	958	1.19	832	1.32	119	0.90	159	16.5	31.2			
1976-77 .....	839	0.99	855	1.04	117	0.77	164	15.8	31.2			
1977-78 .....	1 090	0.47	1 073	0.55	130	0.43	138	15.7	31.5			
1978-79 .....	1 295	1.61	1 091	1.30	171	1.04	219	15.7	31.3			

(a) Wheaten only to 1906-07, thence all kinds.

(b) Bearing and non-bearing.

(c) From 1949-50, private orchards and those no longer worked have been omitted.

(d) Statistics not collected and particulars estimated.

## RURAL PRODUCTION

## Livestock and Associated Produce; Farm Machinery

Year	Livestock Numbers		Wool Production '000 kg	Milk Production '000/	Slaughterings		Farm Machinery				
	Cattle				Sheep and Lambs	Cattle and Calves	Tractors	Shearing Machines	Milking Machines		
	Sheep	Total Dairy Cows									
		'000	'000 kg	'000/		'000		No.			
1841-42	250	21									
1846-47	681	57									
1851-52	1 250	100									
1856-57	1 962	273									
1861-62	3 038	265	5 791								
1866-67	3 912	124	8 954								
1871-72	4 412	143	11 752								
1876-77	6 133	219	19 253								
1881-82	6 804	294	22 118								
1886-87	6 542	285	22 934								
1891-92	7 646	399	80	26 133							
1896-97	6 324	337	84	23 558							
1901-02	5 012	225	75	20 209							
1906-07	6 625	326	98	22 193							
1911-12	6 172	394	122	27 372	127 077	1 276	87				
1916-17	5 091	289	114	17 025	136 174	686	62				
1921-22	6 257	419	166	26 202	188 199	1 208	95				
1926-27	7 284	340	127	32 824	183 817	1 091	143	1 820	420		
1931-32	6 609	265	128	30 400	227 309	1 379	81	3 992	380		
1936-37	7 905	328	170	34 747	289 581	1 697	166	4 563	409		
1941-42	10 246	399	179	47 683	358 687	2 070	154	n.a.	n.a.		
1942-43	10 371	424	185	49 277	357 323	2 272	171	6 705	2 976		
1943-44	10 360	415	188	52 374	355 504	2 480	189	7 064	3 297		
1944-45	8 474	391	187	48 402	328 228	3 065	175	8 044	3 770		
1945-46	6 787	374	176	33 386	360 732	2 017	148	9 211	3 978		
1946-47	7 959	424	187	42 193	426 878	1 662	146	9 456	4 306		
1947-48	9 055	445	197	52 821	420 513	1 665	148	9 664	4 932		
1948-49	9 366	461	203	52 120	415 058	2 011	189	11 271	5 817		
1949-50	9 477	464	203	54 997	406 420	2 317	201	13 709	6 846		
1950-51	10 167	433	184	56 873	379 826	2 022	218	16 128	8 134		
1951-52	11 470	437	176	61 454	393 237	1 547	216	18 184	9 054		
1952-53	12 037	483	183	71 966	382 781	2 353	187	19 750	9 733		
1953-54	11 838	491	192	66 002	386 418	2 637	220	20 842	10 302		
1954-55	12 817	524	199	70 652	412 330	2 799	233	23 110	11 452		
1955-56	13 585	566	195	78 788	410 739	2 358	227	24 345	12 134		
1956-57	14 984	622	195	85 642	408 694	2 329	252	26 012	12 690		
1957-58	15 237	597	191	84 297	366 415	3 278	283	27 288	13 280		
1958-59	15 634	576	188	84 750	373 234	3 145	287	28 532	13 778		
1959-60	14 025	500	170	89 942	357 323	3 899	238	28 965	13 973		
1960-61	14 952	561	170	80 473	395 510	2 784	174	30 674	14 317		
1961-62	16 415	659	183	93 886	434 152	3 140	201	31 788	14 532		
1962-63	15 737	679	190	94 050	433 697	3 467	254	31 671	14 595		
1963-64	16 402	694	185	95 481	433 244	2 996	279	33 231	14 885		
1964-65	17 289	697	182	97 856	465 065	3 100	275	34 164	15 172		
1965-66	17 993	690	176	104 160	447 325	3 474	277	33 998	15 386		
1966-67	17 864	687	170	107 725	448 699	3 358	265	35 829	15 392		
1967-68	16 405	695	157	101 000	403 693	4 019	245	36 590	15 758		
1968-69	18 392	865	163	105 714	467 377	2 977	220	36 574	15 693		
1969-70	19 747	1 026	149	124 529	482 959	4 232	249	37 264	15 746		
1970-71	19 166	1 196	145	117 258	469 773	5 101	264	37 023	15 852		
1971-72	17 970	1 495	151	117 922	457 732	5 144	290	37 197	n.a.		
1972-73	15 651	1 583	148	106 006	424 265	4 549	384	37 258	n.a.		
1973-74	16 431	1 692	138	100 131	434 107	2 595	359	37 588	n.a.		
1974-75	17 621	1 869	142	107 452	426 371	2 984	465	38 355	n.a.		
1975-76	17 279	1 891	142	101 912	397 500	3 561	549	n.a.	n.a.		
1976-77	15 132	1 608	126	98 442	354 912	3 426	656	n.a.	n.a.		
1977-78	14 073	1 242	117	87 092	316 681	3 240	744	n.a.	n.a.		
1978-79	14 940	1 086	110	87 355	321 199	2 523	659	n.a.	n.a.		

## MINING AND MANUFACTURING PRODUCTION

Year	Mining			Manufacturing (a)	
	Principal Minerals Produced			Value of Production (b)	Number of Establishments
	Copper Ore and Concentrate Tonnes	Coal '000 tonnes	Iron Ore '000 tonnes		
1846 .....	6 565			\$'000	\$'000
1851 .....	7 841			285	622
1856 .....	11 980			825	
1861 .....	11 440			920	
1866 .....	23 661			1 657	
1871 .....	26 948			1 347	
1876 .....	28 597			1 205	
1881 .....	25 871			842	
1886 .....	18 713			554	
1891 .....	16 894		7	551	
1896 .....	5 030		—	496	
1901 .....	8 743		—	1 079	
1906 .....	8 340		76	1 652	
1911 .....	6 017		43	900	1 314
1916 .....	7 396		191	2 504	1 266
1921 .....	1 557		515	2 086	1 438
1926 .....	235		593	2 924	1 791
1931 .....	22		293	1 297	1 644
1936 .....	458		1 918	5 241	1 895
1941 .....	615		2 276	7 074	2 230
1946 .....	—	138	1 847	6 101	2 395
1947 .....	—	196	2 180	7 253	2 707
1948 .....	4	243	2 067	7 514	2 865
1949 .....	3	350	1 471	6 236	2 927
1950 .....	—	266	2 388	8 857	3 046
1951 .....	2	395	2 439	9 875	3 141
1952 .....	5	424	2 727	12 094	3 245
1953 .....	2	456	2 633	12 406	3 339
1954 .....	3	503	2 913	17 160	3 577
1955 .....	—	463	3 093	(c) 41 419	3 750
1956 .....	12	489	3 645	47 853	3 908
1957 .....	40	619	3 444	46 352	4 063
1958 .....	53	767	3 406	47 076	4 168
1959 .....	67	701	3 478	49 332	4 235
1960 .....	30	899	3 492	50 870	4 684
1961 .....	8	1 133	4 055	58 242	5 042
1962 .....	4	1 414	3 567	53 958	5 519
1963 .....	16	1 536	4 310	62 431	5 766
1964 .....	55	1 764	4 437	67 597	5 826
1965 .....	116	2 048	4 463	67 863	5 887
1966 .....	143	2 053	4 876	72 342	6 065
1967 .....	1 470	2 077	4 645	69 345	6 222
1968 .....	518	2 112	5 566	77 398	6 255
1969 .....	3 666	2 246	7 042	98 526	(d) 2 994
1970(e) .....	(f) 249	2 155	7 425	104 195	2 977
1971 .....	2 287	1 626	7 400	112 276	n.a.
1972 .....	2 819	1 536	6 301	111 623	2 979
1973 .....	9 662	1 571	6 874	134 274	2 914
1974 .....	8 830	1 494	6 065	131 446	2 984
1975 .....	10 037	1 798	5 448	125 978	(g) 2 131
1976 .....	18 433	1 819	4 479	131 903	2 287
1977 .....	16 390	1 920	3 450	153 135	2 242
1978 .....	11 975	1 757	2 189	144 573	2 170

(a) Year ended 30 June. (b) Value at site of production. Quarries included from 1916. (c) Comparability affected by revaluation of iron ore. (d) For a description of the changes in definitions see page 462. (e) Year ended 30 June from 1970. (f) Metallic content from 1969-70. (g) From 1974-75 excludes single establishment enterprises employing fewer than four persons.

## GROSS VALUE OF RURAL PRODUCTION

Year	Agricultural				Pastoral		Dairying	Total Rural Production
	Wheat	Barley	Vine and Orchard Fruit	Total	Wool (a)	Total		
\$'000								
1916-17 .....	21 729	599	1 653	27 677	4 274	11 200	2 759	42 909
1921-22 .....	12 577	1 227	3 491	23 221	5 752	8 296	3 678	37 273
1925-26 .....	17 979	1 656	3 352	28 307	8 591	12 930	4 171	47 629
1926-27 .....	19 052	1 685	4 082	30 181	8 937	12 140	3 895	48 357
1927-28 .....	13 247	1 497	3 394	23 257	11 338	14 584	4 125	44 464
1928-29 .....	12 845	1 737	3 909	23 880	9 308	12 472	3 810	42 375
1929-30 .....	10 243	1 448	3 819	21 059	5 098	8 183	3 892	35 055
1930-31 .....	8 091	893	3 241	15 708	3 608	5 801	3 121	26 335
1931-32 .....	17 163	1 363	3 442	25 291	3 843	5 452	3 140	35 444
1932-33 .....	13 097	1 371	3 463	20 921	4 619	5 834	3 654	32 030
1933-34 .....	10 933	1 280	3 618	19 533	9 013	10 608	3 108	34 776
1934-35 .....	10 318	1 553	3 882	19 965	5 309	7 706	3 091	32 489
1935-36 .....	13 135	1 457	3 953	22 863	8 116	10 885	3 797	39 126
1936-37 .....	14 955	1 766	4 191	26 044	8 720	12 315	4 310	44 366
1937-38 .....	15 665	3 040	4 964	29 453	8 141	11 443	5 291	48 241
1938-39 .....	8 580	2 046	4 056	20 008	7 802	12 327	5 171	39 613
1939-40 .....	16 692	3 524	4 637	30 132	10 470	14 792	5 585	52 487
1940-41 .....	8 379	2 321	4 873	20 167	10 532	14 757	6 079	43 134
1941-42 .....	13 913	4 490	4 725	30 142	10 294	13 875	6 735	53 016
1942-43 .....	19 399	2 709	6 481	35 423	12 359	16 917	7 917	63 091
1943-44 .....	12 765	2 188	9 159	32 088	13 067	18 277	8 807	63 003
1944-45 .....	6 065	1 931	6 283	23 548	11 963	17 928	8 880	54 810
1945-46 .....	17 490	4 956	7 729	40 434	8 275	14 535	9 959	69 399
1946-47 .....	27 685	7 598	8 283	51 209	17 092	22 602	10 950	90 106
1947-48 .....	50 154	26 228	9 677	99 477	32 606	37 487	12 525	155 615
1948-49 .....	32 450	10 242	10 087	64 138	40 268	47 636	13 440	131 527
1949-50 .....	40 834	14 524	10 616	81 707	56 268	63 058	16 148	167 594
1950-51 .....	45 587	19 803	13 720	97 871	132 494	139 895	15 500	259 627
1951-52 .....	45 288	27 706	20 382	120 507	72 394	86 034	21 145	234 587
1952-53 .....	57 302	42 128	19 161	139 160	97 158	109 154	23 527	279 982
1953-54 .....	43 939	28 804	20 788	115 744	88 866	105 950	24 238	254 537
1954-55 .....	41 591	23 243	17 426	104 914	83 204	101 059	25 037	239 022
1955-56 .....	38 514	25 227	20 335	110 570	79 822	100 882	30 826	250 685
1956-57 .....	44 846	34 022	23 265	129 994	114 578	138 118	29 003	305 365
1957-58 .....	20 970	19 573	24 435	90 089	84 708	111 027	26 384	235 337
1958-59 .....	43 791	39 889	23 984	140 858	67 595	99 135	32 103	280 007
1959-60 .....	16 495	10 999	21 394	71 092	85 382	123 351	29 454	231 751
1960-61 .....	68 001	37 977	24 525	161 437	70 484	94 451	30 306	294 087
1961-62 .....	51 515	22 952	27 051	124 022	85 801	111 850	29 848	273 451
1962-63 .....	56 285	19 152	25 857	128 417	92 514	127 386	31 968	295 043
1963-64 .....	77 660	26 399	29 567	165 634	113 409	150 466	34 267	358 802
1964-65 .....	74 550	30 135	36 200	178 132	94 328	135 916	37 533	360 507
1965-66 .....	59 559	20 234	31 411	144 017	103 635	152 224	39 293	345 015
1966-67 .....	79 612	26 912	36 779	184 090	104 588	169 226	40 303	404 864
1967-68 .....	42 183	12 818	32 423	127 288	79 925	129 504	37 163	306 222
1968-69 .....	112 551	25 657	37 815	221 097	95 054	136 070	39 016	408 842
1969-70 .....	82 332	23 724	43 330	184 284	91 224	148 939	40 834	386 041
1970-71 .....	40 562	34 902	45 991	164 895	65 525	123 858	43 918	347 038
1971-72 .....	76 381	40 295	49 753	213 206	85 701	153 068	47 262	430 704
1972-73 .....	44 588	27 506	54 415	177 768	164 577	261 753	47 808	503 315
1973-74 .....	196 444	68 276	52 347	392 747	173 180	n.a.	n.a.	772 523
1974-75 .....	163 922	119 305	77 719	432 455	122 442	n.a.	n.a.	705 446
1975-76 .....	118 063	105 865	77 401	373 062	131 865	n.a.	n.a.	676 873
1976-77 .....	73 726	93 807	90 318	330 398	153 550	n.a.	n.a.	709 603
1977-78 .....	50 349	50 553	99 747	289 769	145 277	n.a.	n.a.	698 578
1978-79p .....	263 082	115 267	110 219	605 875	161 985	n.a.	n.a.	1 060 161

(a) Shares of profits from sale of wool under war-time disposal schemes excluded.

## TRADE

## Overseas Exports

Year	Value of Exports				Proportion of Total Exports Classified by Principal Countries of Destination					
	Total	Wheat and Flour	Barley	Wool	Japan	New Zealand	UK	USA	Other Countries	
	\$'000					Per cent				
1861 .....	1 837	76		1 302		3.42	89.46			
1866 .....	2 837	146		1 518		4.62	81.48	2.44	11.46	
1871 .....	3 630	578		1 948		4.00	89.62	n.a.	6.38	
1876 .....	5 928	2 146		2 884		1.96	89.58	0.07	8.39	
1881 .....	6 311	1 846		3 496		0.71	82.03	—	17.26	
1886 .....	5 877	420		3 508		0.69	86.90	0.04	12.37	
1891 .....	11 197	2 728		3 776	0.01	0.29	80.82	0.90	17.98	
1896 .....	8 111	222		3 038	1.38	0.48	56.39	0.28	41.47	
1901 .....	8 866	2 232		2 208	0.07	0.65	51.62	0.10	47.56	
1906 .....	13 742	4 780		3 360	—	0.26	51.68	0.24	47.82	
1911 .....	20 350	7 671	2	4 007	0.04	0.17	45.96	0.13	53.70	
1915-16 .....	12 272	3 511	19	2 824	—	1.01	42.92	21.15	34.92	
1920-21 .....	35 339	28 675	1 175	6 035	—	1.11	59.40	1.16	38.33	
1925-26 .....	38 900	14 825	275	8 865	6.88	1.70	51.94	1.16	38.32	
1930-31 .....	20 123	6 078	685	3 006	2.38	0.81	54.11	0.79	41.91	
1935-36 .....	30 762	9 020	707	7 561	6.66	2.05	67.44	1.11	22.74	
1940-41 .....	26 393	8 617	226	6 656	5.29	3.46	50.46	15.48	25.31	
1941-42 .....	29 624	3 863	338	11 596	1.01	3.39	32.02	34.14	29.44	
1942-43 .....	18 847	4 085	122	6 843	—	10.61	45.27	15.12	29.00	
1943-44 .....	31 170	10 504	410	8 509	—	9.18	40.36	8.61	41.85	
1944-45 .....	38 334	13 175	115	8 376	—	6.30	42.34	13.18	38.18	
1945-46 .....	40 307	7 407	718	14 917	—	4.95	25.45	26.43	43.17	
1946-47 .....	65 023	12 304	2 998	16 095	0.01	5.37	39.47	8.86	46.29	
1947-48 .....	105 805	24 507	16 030	25 608	—	4.44	39.01	8.51	48.04	
1948-49 .....	138 866	38 990	11 952	40 619	0.07	2.31	44.37	8.04	45.21	
1949-50 .....	127 864	23 227	10 564	49 621	2.95	6.38	42.42	7.63	40.62	
1950-51 .....	215 348	36 852	14 662	109 900	5.90	2.39	39.58	14.41	37.72	
1951-52 .....	194 501	42 155	18 035	65 806	4.60	7.26	39.36	14.65	34.13	
1952-53 .....	245 897	36 062	30 975	87 135	8.17	3.32	45.12	12.93	30.46	
1953-54 .....	220 498	30 518	24 465	78 817	6.35	5.80	41.66	10.57	35.62	
1954-55 .....	190 158	24 075	15 794	69 195	5.05	6.59	40.78	11.57	36.01	
1955-56 .....	195 332	26 266	14 069	70 063	6.71	7.47	38.70	10.71	36.41	
1956-57 .....	245 848	32 558	18 535	98 924	13.62	7.40	31.73	13.09	34.16	
1957-58 .....	199 764	24 868	17 183	73 082	11.23	7.85	31.50	9.32	40.10	
1958-59 .....	181 831	23 656	20 404	63 208	13.25	7.86	34.81	8.50	35.58	
1959-60 .....	181 652	19 028	12 251	74 830	12.91	4.30	32.08	7.91	42.51	
1960-61 .....	198 557	36 598	19 219	64 328	18.11	5.60	27.55	4.71	44.03	
1961-62 .....	243 975	47 819	23 422	83 107	14.80	4.14	25.83	8.56	46.67	
1962-63 .....	212 945	32 603	6 968	83 400	16.45	4.57	25.87	8.69	44.42	
1963-64 .....	322 159	76 337	13 828	107 398	17.59	4.83	26.63	5.99	44.96	
1964-65 .....	302 242	53 256	15 247	92 535	17.22	5.06	25.82	7.49	44.41	
1965-66 .....	296 276	45 864	7 050	94 486	18.38	5.89	22.81	10.37	42.55	
1966-67 .....	325 170	55 675	13 056	98 013	20.43	4.69	15.46	8.85	50.57	
1967-68 .....	282 767	31 432	2 321	77 008	21.81	5.05	18.20	11.03	43.91	
1968-69 .....	300 934	27 421	11 683	84 747	25.52	4.55	16.46	9.78	43.69	
1969-70 .....	417 030	59 457	16 133	81 797	19.02	5.58	17.03	9.41	48.96	
1970-71 .....	393 737	83 629	23 670	62 828	18.07	5.66	13.70	6.39	56.18	
1971-72 .....	394 064	64 599	35 652	68 189	18.64	7.21	13.83	5.84	54.48	
1972-73 .....	521 720	48 684	17 250	149 956	23.89	6.41	8.84	7.47	53.39	
1973-74 .....	662 881	103 168	40 790	153 202	19.47	9.18	7.44	4.23	59.68	
1974-75 .....	764 410	174 405	99 517	93 273	16.35	6.73	5.71	2.61	68.60	
1975-76 .....	685 029	109 526	90 290	115 560	19.69	5.41	5.65	3.55	65.70	
1976-77 .....	789 872	84 884	88 072	172 538	21.31	5.33	5.99	4.17	63.20	
1977-78 .....	661 887	51 915	39 512	114 517	16.21	6.50	4.10	6.25	66.94	
1978-79(a) .....	922 754	101 750	71 470	147 010	15.18	5.74	3.45	9.16	66.47	

(a) From 1978-79 export statistics are by 'State of Origin'. Details for previous years are by 'State of Lodgment of Documents'.

## TRADE

## Overseas Imports; Retail Sales

Year	Value of Imports		Proportion of Total Imports Classified by Principal Countries of Origin				Value of Retail Sales of Goods		
	Total	Metals, Metal Manufactures, and Machinery (a)	Japan	UK	USA	Other	Total Excluding Motor Vehicles Etc.		\$ million
							\$'000	Per cent	
1861 .....	2 756	310		80.14	0.32	19.54			
1866 .....	4 193	570		89.69	1.80	8.51			
1871 .....	2 891	342		81.85	1.45	16.70			
1876 .....	6 428	1 084		81.30	1.44	17.26			
1881 .....	7 133	1 022		79.06	3.80	17.14			
1886 .....	5 003	770	0.01	78.90	6.82	14.27			
1891 .....	8 063	1 644	0.02	71.36	7.91	20.71			
1896 .....	6 475	1 198	0.18	68.59	7.82	23.41			
1901 .....	7 854	1 432	0.38	56.91	14.17	28.54			
1906 .....	7 965	2 104	0.64	63.10	10.17	26.09			
1911 .....	12 492	4 132	1.31	58.60	12.81	27.28			
1915-16 .....	10 304	2 816	3.12	47.68	19.81	29.39			
1920-21 .....	24 764	6 558	1.55	42.07	21.25	35.13			
1925-26 .....	28 160	10 602	1.13	43.30	27.84	27.73			
1930-31 .....	7 833	1 802	1.14	36.96	16.66	45.24			
1935-36 .....	10 839	3 616	2.24	38.65	21.16	37.95			
1940-41 .....	10 924	3 158	1.56	38.09	12.01	48.34			
1945-46 .....	17 556	3 622	—	62.28	10.13	27.59			
1946-47 .....	23 875	6 788	0.03	35.25	13.79	50.93			
1947-48 .....	45 908	12 740	—	37.96	15.45	46.59			
1948-49 .....	60 914	21 678	0.12	49.33	9.02	41.53			
1949-50 .....	91 509	44 334	1.77	52.15	8.81	37.27			
1950-51 .....	112 002	50 446	1.98	48.31	8.42	41.29			
1951-52 .....	186 062	80 450	5.16	39.99	9.37	45.48			
1952-53 .....	86 549	41 456	1.14	43.53	11.71	43.62	271.7	84.3	
1953-54 .....	102 945	47 142	0.46	50.63	8.93	39.98	294.4	97.6	
1954-55 .....	129 607	63 144	1.28	49.18	13.28	36.26	324.4	113.4	
1955-56 .....	125 504	64 656	3.18	49.17	11.70	35.95	347.8	123.6	
1956-57 .....	90 813	40 536	1.39	44.01	12.26	42.34	362.3	124.7	
1957-58 .....	94 205	40 792	1.85	46.37	11.91	39.87	367.2	125.4	
1958-59 .....	90 693	40 534	2.56	42.08	11.50	43.86	387.2	138.0	
1959-60 .....	119 493	57 962	2.69	43.89	12.15	41.27	436.6	160.2	
1960-61 .....	142 764	72 570	5.37	32.66	17.61	44.36	448.9	156.1	
1961-62 .....	103 386	46 774	3.28	31.95	21.87	42.90	451.6	143.1	
1962-63 .....	139 826	71 820	4.08	31.83	22.92	41.17	479.9	180.5	
1963-64 .....	179 651	94 302	4.72	24.75	30.63	39.90	525.3	212.5	
1964-65 .....	204 856	108 243	8.01	23.72	29.11	39.16	574.5	238.0	
1965-66 .....	198 156	103 032	6.84	23.32	27.25	42.59	602.0	220.4	
1966-67 .....	196 771	97 861	7.69	21.64	27.72	42.95	627.1	214.7	
1967-68 .....	215 619	113 215	7.16	17.29	32.71	42.84	663.6	242.0	
1968-69 .....	231 956	134 222	11.19	19.82	27.35	41.64	706.9	261.1	
1969-70 .....	201 223	98 204	10.77	21.49	21.50	46.23	762.3	285.7	
1970-71 .....	198 358	98 358	14.44	25.10	17.32	43.14	818.8	297.6	
1971-72 .....	189 748	83 083	15.08	22.83	14.48	47.61	890.9	322.5	
1972-73 .....	199 978	88 271	20.48	17.49	15.08	46.95	1 037.1	n.a.	
1973-74 .....	313 915	142 187	22.57	12.03	16.91	48.49	1 237.3	457.9	
1974-75 .....	482 077	216 355	19.17	14.20	13.10	53.53	1 503.3	n.a.	
1975-76 .....	501 476	203 407	18.57	11.14	14.84	55.45	1 781.1	n.a.	
1976-77 .....	629 309	259 695	22.23	8.52	13.38	55.87	2 025.4	n.a.	
1977-78 .....	628 568	248 236	21.79	8.85	12.47	56.89	2 158.9	n.a.	
1978-79 .....	865 554	437 704	18.97	6.74	26.75	47.54	2 342.3	n.a.	

(a) Includes motor vehicles and other transport equipment.

## TRANSPORT AND COMMUNICATION

## Public Transport

Year	Railways			Buses and Trams (a)		'000 net tonnes (b)
	Passengers Carried	Goods Carried	Revenue	Passengers Carried	Revenue	
	'000	'000 tonnes	\$'000	'000	\$'000	
1841 .....						18
1846 .....						25
1851 .....						75
1856 .....	248	32	44			114
1861 .....	310	145	185			103
1866 .....	425	171	236			169
1871 .....	394	228	235			187
1876 .....	1 400	387	402			347
1880-81 .....	2 902	683	837			641
1885-86 .....	3 962	779	1 098			771
1890-91 .....	5 296	1 427	2 448			1 288
1895-96 .....	5 436	1 057	1 973			1 661
1900-01 .....	8 864	1 628	2 473			1 967
1905-06 .....	10 715	1 732	2 700			2 785
1910-11 .....	16 620	2 731	4 030	34 013	480	3 625
1915-16 .....	20 513	2 397	3 931	43 372		2 566
1920-21 .....	23 788	2 682	5 884	55 324	1 111	2 887
1925-26 .....	25 752	3 563	8 524	66 207	1 322	4 526
1930-31 .....	15 453	2 175	5 201	52 756	1 444	4 166
1935-36 .....	17 431	2 482	5 781	50 625	1 347	5 318
1940-41 .....	20 360	2 770	7 060	56 518	1 537	3 047
1945-46 .....	23 119	2 997	9 794	90 239	2 469	1 733
1950-51 .....	17 178	3 519	(c) 14 715	78 141	3 238	5 283
1951-52 .....	18 269	4 966	19 022	75 436	3 684	5 529
1952-53 .....	17 565	4 172	24 976	66 571	(d) 4 232	5 900
1953-54 .....	17 605	4 457	25 848	66 972	4 145	6 108
1954-55 .....	16 849	4 497	26 522	66 446	4 267	6 123
1955-56 .....	16 434	4 436	26 662	63 515	4 668	6 282
1956-57 .....	17 406	4 518	28 132	62 190	4 578	6 360
1957-58 .....	17 564	4 166	27 033	60 083	4 988	6 569
1958-59 .....	16 805	4 227	26 179	59 613	5 056	6 744
1959-60 .....	17 038	4 059	25 652	58 168	5 641	6 745
1960-61 .....	15 574	4 537	27 883	58 912	5 515	7 613
1961-62 .....	15 176	4 638	27 984	57 950	5 430	7 646
1962-63 .....	14 922	4 530	27 826	58 039	5 436	7 886
1963-64 .....	15 227	5 213	29 673	58 571	5 473	9 486
1964-65 .....	15 196	5 131	29 960	56 434	5 899	9 697
1965-66 .....	15 511	4 823	29 137	53 112	6 049	9 517
1966-67 .....	15 432	4 909	30 417	49 735	6 270	10 220
1967-68 .....	15 242	4 401	28 244	47 813	6 225	10 028
1968-69 .....	14 423	5 037	30 522	45 393	6 472	10 345
1969-70 .....	13 990	5 922	33 566	43 345	6 696	12 213
1970-71 .....	13 946	6 025	34 635	41 259	6 881	11 303
1971-72 .....	13 433	5 948	35 603	40 842	6 978	10 533
1972-73 .....	13 320	5 820	35 332	41 680	7 304	9 957
1973-74 .....	13 597	6 655	39 827	(e) 47 533	(e) 9 958	9 639
1974-75 .....	12 697	6 783	48 315	58 298	13 427	9 743
1975-76 (f) .....	12 672	6 184	50 099	58 336	14 454	9 386
1976-77 (f) .....	12 866	6 442	54 685	58 129	16 782	8 043
1977-78 .....	n.a.	n.a.	n.a.	57 354	16 073	n.a.
1978-79 .....	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

(a) Buses and trams operated by Bus and Tram Division of the State Transport Authority. Years ended 31 July from 1912 to 1939, 31 January from 1940 to 1952, and 30 June from 1953.

(b) Years ended 31 December to 1913; thereafter year ended 30 June.

(c) Excludes Treasury grant from 1949-50.

(d) Excludes Government grant from 1952-53.

(e) From March 1974 includes details of licensed private services taken over by the Bus and Tram Division.

(f) Includes country railways operated on behalf of the Commonwealth.

## TRANSPORT AND COMMUNICATION

Year	Motor Vehicles on Register			Drivers and Riders Licences in Force	Tele- phone Services in Opera- tion (a)	Radio Licences in Force (b)	Post Office Revenue		
	Cars and Station Wagons	Utilities, Vans, Trucks, Buses	Total (incl. Cycles, Scooters)				Postal, Etc. (c)	Tele- graph (c)	Tele- phone
	'000			Number			\$'000		
1851 .....							14		
1856 .....							18		
1861 .....							33	15	
1866 .....							56	24	
1871 .....							58	22	
1876 .....							114	64	
1881 .....							166	123	
1886 .....							214	160	
1891 .....							227	201	
1896 .....							250	242	
1901 .....					1 831		282	263	
1906 .....					2 510		342	182	61
1911 .....					6 086		490	233	93
1916 .....					10 184		484	277	212
1921 .....	13.2		21.4		15 984		762	420	468
1926 .....	42.5	8.2	62.5	79 659	33 547	12 105	867	402	903
1931 .....	(d) 45.1	(d) 12.1	(d) 67.3	106 053	39 552	32 075	879	282	1 168
1936 .....	53.7	19.4	84.3	92 227	39 911	93 881	1 017	327	1 197
1941 .....	54.5	24.4	86.2	122 280	47 962	136 457	1 252	458	1 522
1946 .....	64.4	31.4	107.2	137 979	53 126	164 497	1 921	815	2 170
1947 .....	67.4	34.7	115.2	149 304	56 449	180 371	1 989	875	2 345
1948 .....	75.7	36.4	127.5	159 814	60 249	196 336	2 190	946	2 507
1949 .....	84.3	40.7	143.5	172 063	64 008	211 436	2 345	848	2 761
1950 .....	97.5	46.0	163.9	192 469	69 907	226 723	2 546	1 169	3 536
1951 .....	108.9	51.2	183.6	215 157	74 457	243 019	2 938	1 550	4 271
1952 .....	120.5	55.9	200.4	232 119	80 919	(e) 207 527	3 872	1 818	5 588
1953 .....	129.7	61.2	214.3	252 216	86 977	210 808	4 086	1 191	6 070
1954 .....	139.7	64.6	226.9	265 727	93 104	218 745	4 311	1 112	6 728
1955 .....	150.5	70.2	244.4	281 091	100 171	221 118	4 670	1 028	7 266
1956 .....	161.4	73.2	257.5	299 158	107 649	228 625	5 033	1 075	8 067
1957 .....	171.9	75.7	269.3	315 044	114 390	234 120	5 579	1 358	8 993
1958 .....	184.3	77.8	283.0	328 833	122 311	238 916	5 877	1 385	9 950
1959 .....	200.3	81.0	301.5	340 973	131 060	247 468	6 247	1 421	10 524
1960 .....	214.9	84.1	318.3	369 584	138 019	249 148	7 359	1 487	12 793
1961 .....	224.5	82.5	325.2	393 869	144 502	249 475	7 729	1 643	14 544
1962 .....	238.9	82.5	338.1	397 803	152 785	249 673	7 761	1 434	15 604
1963 .....	258.8	83.9	358.2	414 656	162 012	256 741	8 322	1 592	16 508
1964 .....	280.1	86.3	380.5	427 717	173 314	266 027	8 709	1 852	19 181
1965 .....	298.1	86.4	397.4	447 985	182 249	(f) 269 040	9 312	2 187	23 038
1966 .....	314.0	87.3	413.5	464 778	192 922	281 747	9 759	2 398	24 757
1967 .....	327.7	87.1	427.6	481 496	203 191	278 069	10 117	2 521	26 990
1968 .....	342.9	87.6	443.9	491 765	212 842	290 051	11 378	2 688	30 124
1969 .....	364.7	89.6	468.2	513 687	224 174	297 877	(g) 13 211	(g) 1 606	(g) 34 523
1970 .....	384.0	90.7	490.1	535 184	239 452	302 519	13 885	1 918	38 465
1971 .....	400.8	91.5	510.3	550 745	251 330	310 485	15 847	1 988	43 333
1972 .....	420.4	92.8	536.0	570 562	261 608	315 612	18 309	2 342	50 820
1973 .....	445.4	97.9	572.4	592 481	278 687	332 411	19 227	2 569	58 306
1974 .....	468.6	100.6	601.3	612 693	298 300	339 516	21 298	2 963	68 208
1975 .....	491.5	104.0	628.9	637 248	311 804	(h)	25 128	3 581	83 406
1976 .....	513.0	112.7	657.9	658 671	334 948	(h)	n.a.	n.a.	n.a.
1977 .....	528.8	116.9	677.5	690 663	361 334	(h)	n.a.	n.a.	n.a.
1978 .....	536.5	118.7	685.6	716 991	390 852	(h)	n.a.	n.a.	n.a.
1979 .....	(i) 543.8	(i) 117.7	(i) 691.8	737 410	420 871	(h)	n.a.	n.a.	n.a.

(a) At 30 June from 1916; at 31 December in earlier years. (b) At 31 December from 1931 to 1943; otherwise at 30 June in years shown. (c) Years ended 30 June from 1886; earlier years ended 31 December. Telegraph includes telephone to 1901 and radio to 1948, from which time radio etc., licence fees have been excluded from Post Office revenue. (d) Vehicles in actual use on roads from 1930. (e) All receivers at the one address covered by one licence from 1952. (f) Combined radio and television licences included since 1 April 1965. (g) From 1968-69 content not comparable with previous years. (h) Abolished from 17 September 1974. (i) At Census 30 September 1979.

## PUBLIC FINANCE

Year	State Government					Local Government Revenue			
	Total Revenue	Expenditure		Public Debt		State Taxation (a)	From Rates	Govern- ment Grants	Total
		From Revenue	From Loan (Net)	Total	Per Head				
\$'000	\$'000	\$'000	\$'000	\$	\$'000	\$'000	\$'000	\$'000	\$'000
1840-41 ....	51	180				202			
1845-46 ....	95	77				326	54		114
1850-51 ....	445	367				282	46		114
1855-56 ....	960	1 160		590	5.50	168	188		488
1860-61 ....	1 117	966		1 733	13.30	282	40		114
1865-66 ....	1 900	2 130		1 551	9.20	478	60		162
1870-71 ....	1 556	1 519		4 335	23.00	498	80		194
1875-76 ....	2 640	2 647		7 674	34.20	920	118	80	286
1880-81 ....	4 344	4 108		22 394	78.30	1 168	188	136	488
1885-86 ....	4 558	4 767	2 800	36 680	118.60	1 603	208	108	502
1890-91 ....	5 464	5 207	968	43 315	135.80	1 655	276	254	702
1895-96 ....	5 043	5 019	886	48 433	137.60	1 600	264	194	652
1900-01 ....	5 648	5 693	845	52 129	146.40	1 203	302	222	738
1905-06 ....	5 612	5 437	900	60 165	165.80	735	348	198	740
1910-11 ....	8 363	7 929	3 752	(b) 56 065	136.50	1 092	481	336	1 004
1915-16 ....	8 714	9 483	4 371	79 049	179.40	1 403	652	302	1 150
1920-21 ....	14 303	15 087	9 351	104 725	210.70	3 244	986	580	1 936
1925-26 ....	20 948	20 922	12 860	160 521	290.10	5 428	1 640	942	3 441
1930-31 ....	21 452	25 079	6 581	199 055	345.70	6 800	1 672	397	2 612
1935-36 ....	22 819	22 521	2 502	211 397	359.70	6 409	1 665	509	2 824
1940-41 ....	25 849	26 015	2 548	219 599	365.30	8 683	1 851	577	3 170
1945-46 ....	32 687	32 687	3 419	221 498	348.80	(c) 4 036	2 040	451	3 474
1950-51 ....	67 344	66 885	33 871	296 776	405.20	8 104	3 830	1 963	7 579
1951-52 ....	85 276	85 098	52 875	346 872	459.40	9 586	4 686	2 578	9 548
1952-53 ....	98 203	98 153	40 885	389 706	502.30	9 983	5 761	2 306	10 900
1953-54 ....	104 751	101 132	39 879	429 446	538.80	13 073	6 524	3 867	13 416
1954-55 ....	103 768	108 236	42 912	427 925	577.10	15 092	7 041	3 836	14 213
1955-56 ....	118 805	121 665	42 666	512 179	603.60	16 150	8 162	4 381	16 310
1956-57 ....	131 522	131 619	43 793	552 880	663.20	18 620	9 563	4 733	18 436
1957-58 ....	141 285	142 083	37 153	593 628	662.00	19 541	10 333	4 848	19 721
1958-59 ....	145 360	147 414	41 442	635 404	690.00	20 435	11 060	4 948	21 080
1959-60 ....	160 555	161 177	43 432	678 210	717.50	22 297	11 971	5 478	22 535
1960-61 ....	172 559	170 182	44 739	722 038	743.20	23 425	13 076	(d) 3 524	25 034
1961-62 ....	186 405	185 392	43 773	763 399	773.10	25 150	14 887	2 984	27 969
1962-63 ....	195 168	194 589	42 047	807 044	798.50	26 940	15 943	3 215	29 094
1963-64 ....	211 006	207 755	44 218	853 553	822.30	29 825	16 968	4 317	33 725
1964-65 ....	222 181	224 803	53 100	902 823	845.70	34 901	18 625	3 804	33 952
1965-66 ....	236 816	243 650	55 089	955 128	872.30	37 636	20 412	4 106	38 020
1966-67 ....	258 823	258 717	57 016	1 013 060	913.00	44 708	22 875	4 244	42 319
1967-68 ....	274 544	277 404	55 382	1 074 959	958.30	48 255	24 369	4 493	42 813
1968-69 ....	298 355	297 895	61 390	1 143 954	1 004.10	53 351	26 276	4 505	45 263
1969-70 ....	338 498	335 578	67 469	1 210 489	1 045.30	59 840	27 596	4 988	48 556
1970-71 ....	386 859	386 838	71 491	1 256 337	1 070.40	62 745	29 118	4 758	49 589
1971-72 ....	455 245	456 312	111 740	1 333 720	1 124.10	97 476	32 224	7 653	54 886
1972-73 ....	520 866	524 777	117 411	1 415 129	1 161.94	120 474	35 874	15 025	65 917
1973-74 ....	641 967	645 368	107 566	1 481 337	1 198.30	156 903	42 202	10 508	67 682
1974-75 ....	828 985	820 601	123 854	1 425 333	1 138.35	219 190	53 804	19 118	96 000
1975-76 ....	1 036 985	1 034 698	160 602	1 349 702	1 105.50	272 760	65 670	33 551	99 221
1976-77 ....	1 174 025	1 183 180	175 552	1 495 737	1 171.47	314 280	76 385	34 881	138 729
1977-78 ....	1 167 196	1 192 063	171 329	1 605 834	1 247.15	323 502	85 680	38 052	156 074
1978-79 ....	1 264 705	1 258 252	161 087	1 702 221	1 318.84	342 344	n.y.a.	n.y.a.	n.y.a.

(a) Excludes all taxation paid to Special Funds. From 1966-67 the coverage of this item does not completely coincide with SA Treasury classifications. (b) Debt of Northern Territory and Port Augusta-Oodnadatta railway transferred to Commonwealth Government. (c) Uniform taxation in force from 1941-42.

(d) Excludes reimbursement for work done on behalf of Highways Department from 1961.

## PRIVATE FINANCE

Year	Banking		Life Insurance		General Insurance Revenue (b)	Co-op- erative Societies (b)	Friendly Societies	Building Societies (b)
	Trading Banks	Savings Bank Deposits at 30 June	New Policies Issued	Policies in Existence Sum Assured				
	\$'000							
1846 .....		183						
1851 .....	426	29						
1856 .....	1 419	106						
1861 .....	2 864	1 480	243					
1866 .....	6 240	2 803	499					
1871 .....	5 715	3 043	982					
1876 .....	9 449	6 632	1 703					
1881 .....	13 483	9 885	2 499					
1886 .....	19 226	9 924	3 306					
1891 .....	16 297	15 550	4 316					
1896 .....	9 470	15 343	5 673					
1901 .....	8 546	13 437	7 591					
1906 .....	10 612	15 598	9 534					
1911 .....	16 970	22 257	14 872					
1916 .....	20 325	27 264	20 070					
1921 .....	27 296	44 199	32 635	6 000	40 272	1 305	10 248	9 572
1926 .....	31 672	51 574	43 558	9 341	60 244	2 045	41 539	17 011
1931 .....	44 119	44 956	42 844	6 266	65 016	1 627	45 791	(c) 14 081
1936 .....	43 760	52 399	50 617	10 791	75 984	1 859	45 592	71 658 9 257
1941 .....	39 547	64 182	55 019	11 416	101 825	2 643	n.a.	76 357 n.a.
1946 .....	31 560	93 397	131 729	22 805	147 230	2 705	70 620	80 419 18 665
1951 .....	62 109	206 743	195 698	44 899	261 931	9 298	92 424	71 591 22 782
1952 .....	89 163	214 630	207 452	48 475	298 494	12 370	96 134	67 563 23 016
1953 .....	79 574	247 260	227 750	51 671	335 457	14 593	100 323	63 922 23 801
1954 .....	95 968	250 802	245 898	59 540	377 093	16 165	107 069	61 345 23 814
1955 .....	106 740	250 795	263 384	70 458	426 881	18 321	109 667	59 149 24 397
1956 .....	108 515	241 044	271 512	75 301	477 554	20 590	114 018	57 216 24 266
1957 .....	105 618	266 897	284 802	89 470	539 120	23 835	109 636	55 499 (d)
1958 .....	125 971	262 700	297 716	94 137	599 723	24 656	(d) 54 181	24 321
1959 .....	124 924	272 599	314 304	111 440	676 406	26 223	112 844	53 114 24 665
1960 .....	149 172	265 498	331 996	131 951	756 581	27 975	116 645	52 239 24 847
1961 .....	147 348	269 848	333 485	143 628	841 563	32 363	111 031	51 551 24 835
1962 .....	(a) 164 936	(a) 276 750	361 980	157 636	955 426	33 740	116 405	51 198 21 854
1963 .....	182 370	285 318	416 155	165 183	1 056 390	37 499	108 283	50 765 21 260
1964 .....	202 360	323 858	475 803	197 790	1 161 986	41 695	113 224	50 946 22 348
1965 .....	243 866	347 780	519 268	215 946	1 294 450	45 433	115 828	51 258 22 746
1966 .....	273 916	365 466	558 857	239 250	1 439 083	50 121	(e) 116 615	51 109 23 611
1967 .....	298 981	368 851	605 167	279 996	1 618 112	56 114	125 638	51 001 23 722
1968 .....	345 315	388 772	643 690	301 602	1 807 040	59 981	125 385	51 070 22 458
1969 .....	362 967	408 903	691 778	347 048	2 031 479	65 354	126 529	50 880 26 373
1970 .....	390 932	423 410	733 100	437 699	2 313 244	70 640	123 263	50 796 33 863
1971 .....	411 180	436 297	787 901	525 879	2 667 651	76 020	124 021	50 488 41 670
1972 .....	448 164	474 192	874 138	586 663	3 053 169	89 173	123 755	50 077 49 804
1973 .....	516 424	619 958	1 060 425	727 998	3 565 754	98 678	121 893	50 664 66 853
1974 .....	671 782	815 622	1 174 813	908 775	4 175 174	127 473	122 562	50 779 99 043
1975 .....	748 609	973 499	1 394 585	1 095 897	4 927 762	(f) 187 316	122 701	49 888 131 049
1976 .....	914 300	1 214 488	1 617 336	1 200 765	5 666 521	231 649	124 506	48 057 n.a.
1977 .....	1 149 413	1 300 883	1 780 841	1 273 906	6 370 336	267 640	125 148	45 815 n.a.
1978 .....	1 370 681	1 301 516	1 945 344	1 328 572	7 050 356	276 540	125 235	43 051 n.a.
1979 .....	1 642 474	1 436 959	2 138 263	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.

(a) Until 1961, average of balances at close of business on Wednesdays during the June quarter of the year stated. From 1962, average of weekly figures for the month of June of the year stated. (b) Year ended 30 June. (c) Membership at 30 June from 1932; previously 31 December. (d) Balance dates of societies do not coincide; from this year figures are aggregates of members at balance dates within the year ended 30 June. (e) Figures from 1966 have been revised because of a redefinition of Co-operative Societies, and details for years before 1966 are not comparable. (f) From 1974-75 premium income only; details of interest, dividends and rent no longer available.

## APPENDIX B

# PRINCIPAL EVENTS

### CHRONOLOGICAL LIST OF IMPORTANT EVENTS IN SOUTH AUSTRALIA SINCE 1836

**1836**—First migrants landed at Kangaroo Island on 20 July. First South Australian newspaper published in London. Colony's first school opened on Kangaroo Island. The Surveyor-General, Col. Light arrived in November and commenced survey of Adelaide. Governor Hindmarsh arrived in HMS *Buffalo* and proclaimed South Australia a Province on 28 December.

**1837**—Col. Light completed survey of Adelaide and designed the city's present layout. First Adelaide land allotments made. First newspaper published in South Australia. South Australian Supreme Court established. First hospital opened in North Terrace, Adelaide.

**1838**—First overland cattle and sheep drives from New South Wales. First export from South Australia, a small clip of wool, dispatched. First German settlers under the leadership of Pastor Kavel arrived in South Australia. Formation of first police force.

**1839**—Col. Light died at Thebarton and buried in Light Square. First road in South Australia built between Adelaide and Port Adelaide. Adelaide Chamber of Commerce founded.

1840—Eyre started overland journey to Western Australia. The Municipality of Adelaide incorporated, the first in Australia. McLaren Wharf, Port Adelaide, opened by Governor Gawler.

1841—First South Australian mine (silver-lead) opened near Glen Osmond. Assisted migration suspended because of depression. Following financial crisis Governor Gawler recalled and succeeded by Governor Grey. Eyre arrived at Albany in Western Australia.

1842—Registration of births, deaths and marriages commenced. Portions of South Australia divided for first time into counties. Copper discovered at Kapunda. Legislative Council constituted. The South Australian Board of Colonisation Commissioners abolished by the British Government.

1843—Stripper invented by Ridley. A flour mill built at Hindmarsh.

1844—First Colonial Census held, and showed a population of 17 366.

1845—Copper discovered at Burra. Sturt explored the north-eastern part of the State. Gold found in South Australia, near Montacute. Assisted migration resumed.

1846—First pastoral leases granted.

1847—First winery in the Barossa Valley commenced operation. St Peters College established.

1848—Opening of The Savings Bank of South Australia. First ferry across the River Murray commenced operations at Wellington.

1849—The Central Board of Main Roads established.

1850—An Act granting representative government to South Australia passed by the British Parliament.

1851—The Central Board of Education established.

1852—First overland gold escort arrived in Adelaide.

1853—W. R. Randell's *Mary Ann* and Francis Cadell's *Lady Augusta* initiated the navigation of the River Murray.

1854—State's first railway (horse-drawn) built from Goolwa to Port Elliot.

1855—First South Australian postage stamps issued.

1856—First telegraph line opened from Adelaide to Port Adelaide. The new Constitution Act embodying the principle of responsible government proclaimed; it provided for Parliament to consist of two Houses; a Legislative Council and a House of Assembly. First steam railway from Adelaide to Port Adelaide constructed. Population of the State passed 100 000.

1857—Railway to Smithfield and Gawler opened.

1858—The Real Property Act, which embodied the principles of conveyancing formulated by Torrens, came into operation. First telegraph line to Melbourne opened.

1859—A jetty over 350 metres in length constructed at Glenelg. Copper discovered at Wallaroo.

1860—Water supplied to the City of Adelaide by means of a main connected with the reservoir at Thorndon Park.

1861—Copper discovered at Moonta. Water laid on to houses in Adelaide. John McDouall Stuart set out to cross the continent from south to north. The South Australian boundary shifted west to coincide with the boundary of Western Australia.

1862—Stuart reached Chambers Bay on the coast of the Northern Territory.

1863—Administration of the Northern Territory taken over by South Australia. Shops of Adelaide lit for the first time with gas.

1865—Annual leases of pastoral lands sold by auction for first time. The Bank of Adelaide founded.

1866—Camels for the purpose of exploration introduced by Sir Thomas Elder. The Adelaide Town Hall opened.

1867—Visit of His Royal Highness Prince Alfred, Duke of Edinburgh, who laid the foundation stone of the General Post Office.

1869—Foundation stone of St Peters Cathedral laid. Prince Alfred College opened. Adelaide Chamber of Manufacturers founded.

1870—Construction of the transcontinental telegraph from Port Darwin commenced. John Forrest and party made first of two journeys of exploration from Perth.

1872—Transcontinental telegraph from Port Darwin completed and first direct telegram from London received.

1873—Eight-hour working day adopted. First Health Act, establishing a Central Board of Health, passed.

1874—The University of Adelaide founded.

1875—The State Education Act passed. First Forestry Board established.

1876—Telegraph communication with New Zealand established. The Smith brothers invented the 'stump jump' plough. South Australia became first State to give legal recognition to trade unions.

1877—Overland telegraph line from Port Augusta to Eucla completed and first telegram from Perth transmitted. The Adelaide Bridge completed.

1878—Provisions of the Education Act relating to compulsory school attendance brought into force in the Adelaide school district. First tramway (horse-drawn) in any Australian city commenced carrying passengers to Kensington and North Adelaide. The State's population passed 250 000.

1879—Foundation stone of the Adelaide University laid. First bridge across River Murray in South Australia opened at Murray Bridge.

1881—First reclamation of swamp areas of River Murray. Art Gallery opened by His Royal Highness Prince Albert Victor. Construction of the weir which created the Torrens Lake completed.

1882—Fire Brigades Board established.

1883—The Telephone Exchange commenced operations. Roseworthy Agricultural College opened to students.

1884—Largs Bay Fort opened. Adelaide Trades and Labor Council, the first delegates society, inaugurated.

1885—Broken Hill silver mines opened. Column erected on Mount Lofty summit as a prominent landmark for mariners.

1887—Act authorising payment to members of Parliament passed. Renmark Irrigation Colony established. First express trains ran between Adelaide and Melbourne. The Jubilee Exhibition opened. Stock Exchange of Adelaide formed by amalgamation of Adelaide Stock Exchange and Stock Exchange of South Australia.

1888—Totalisator legally authorised by an Act of Parliament.

1889—The School of Mines and Industries opened. Smelting of silver-lead ore from Broken Hill commenced at Port Pirie.

1890—First South Australian built locomotive completed.

1892—Education made free to the compulsory age, and standard.

1894—Act granting the franchise to women passed. Inauguration of industrial arbitration by the establishment of Boards of Conciliation.

1896—State Bank of South Australia opened. Women voted for the first time at the general election. Happy Valley Reservoir opened. One of Adelaide's most severe droughts commenced, and continued for several years.

1899—Second referendum concerning the establishment of Federation held. In South Australia, 65 990 electors voted for Federation and 17 053 against. First military contingent left South Australia for the Boer War.

1900—Adelaide lit for the first time with electric light. The Commonwealth of Australia Constitution Act received Royal Assent and a Proclamation was issued uniting the States as the Commonwealth of Australia as from 1 January 1901. Conservatorium of Music opened. First Workmen's Compensation Act passed.

1901—Early closing of shops introduced. First Commonwealth Parliament elected. The Duke and Duchess of York arrived in the *Ophir*. The Customs Act came into force. The Electric Light Works was opened. Iron Knob connected to Whyalla by railway.

1902—Flinders column, at Mount Lofty, dedicated to the public by the Governor, Lord Tennyson.

1905—First kindergarten in South Australia opened.

1906—Military cadet system inaugurated.

1907—High schools were established in a number of country centres. Municipal Tramways Trust incorporated. First Federal basic wage judgment—the 'Harvester' award—made.

1908—Penny savings bank accounts for children established. The Outer Harbor opened. Adelaide High School established.

1909—Adelaide electric tramways commenced operations. Payment of age pensions by the Commonwealth Government commenced.

1910—Payment of invalid pensions by the Commonwealth Government commenced. First recorded monoplane flight in Australia made by F. C. Custance at Bolivar.

1911—'Penny Postage' to all parts of the British Empire introduced. The Federal Defence Act came into operation. Administration of the Northern Territory transferred to the Commonwealth Government.

1913—Medical inspection of school children introduced. Commonwealth Bank formally opened. Metropolitan Abattoirs established.

1914—First South Australian military expeditionary force embarked at Outer Harbor. South Australia experienced its most severe drought.

1915—Prices of commodities fixed by a commission. A referendum approved the closing of liquor bars at 6 p.m. Women appointed as justices of the peace for the first time. First shipment of iron ore made from Whyalla to steelworks in Newcastle. First women police appointed. Opal discovered at Coober Pedy.

1916—Referendum proposing compulsory military service abroad defeated. First Public Service Commissioner appointed. First State living wage with general application declared.

1917—German private schools in South Australia were closed. East-West transcontinental railway completed and the first train ran to Perth. Mr R. G. Carey, in a Bleriot 60, made the State's first airmail flight from Enfield to Gawler.

1919—Captain Butler flew from Adelaide across Gulf St Vincent carrying air mail to Minlaton. Soldier Settlement Bill passed by the South Australian Parliament. First Lord Mayor of Adelaide elected.

1920—Sir Ross Smith and party arrived at Adelaide by non-stop flight from Melbourne. Peace Exhibition held at the Jubilee Exhibition buildings. The Prince of Wales visited South Australia.

1921—The State's population passed 500 000.

1922—First lock on the River Murray completed and opened at Blanchetown.

1923—The Government approved an extensive re-organisation of the railway system.

1924—Public Debt Commissioners were appointed. Air mail between Adelaide and Sydney inaugurated. Waite Agricultural Research Institute established. First radio stations commenced broadcasting.

1925—Showgrounds at Wayville opened. The first Federal election at which voting was compulsory took place. Foundation stone of Adelaide Teachers Training College laid.

1926—The South Australian barley exhibit won all prizes at the Brewers Exhibition in London. The State Bank opened for general banking business. Construction of a narrow gauge railway from Oodnadatta to Alice Springs approved. State petrol tax declared invalid following a Commonwealth Government writ against the State.

1927—Extension of the North-South railway commenced. The first train arrived at Renmark following the opening of the Paringa Bridge. The Duke and Duchess of York arrived in South Australia.

1929—The first air mail left Adelaide for Perth. The first train to Alice Springs left Adelaide. Compulsory military training abolished and replaced by a voluntary system. Electric tram service to Glenelg commenced.

1930—All officers of the South Australian Public Service over the age of sixty-five years were compulsorily retired. The South Australian basic wage was reduced by 18c to \$1.25 a day. Transport Control Board, State Finance Committee and Unemployed Relief Council established.

1931—City Bridge opened. Financial Plan formulated at the Premiers' Conference adopted and Financial Emergency Act passed. Federal basic wage reduced by 10 per cent for twelve months but was to be adjusted in accordance with a retail price index. State basic wage reduced from \$1.25 to \$1.05 a day. Basic wage for females reduced, first from \$3.95 to \$3.50 and later to \$3.15 a week.

1932—Boundaries and names of a number of local government areas changed and others abolished following the report of a commission.

1933—The Farmers Assistance Board, the Betting Control Board and the Metropolitan and Export Abattoirs Board established.

1934—Water restrictions in force from May until the following January.

1935—The Nomenclature Act of 1935 restored the former German names to a number of towns, the names of which had been changed in 1917.

1936—Centenary year of the State's foundation celebrated. Contract signed for the completion of Parliament House and the foundation stone laid by the Governor, Sir Winston Dugan.

1937—South Australian Housing Trust established. New Federal basic wage of \$7.40 per week, which incorporated a 'prosperity' loading, declared. First trolley bus service inaugurated. Mount Bold Reservoir with a capacity of 30 000 megalitres filled, almost doubling Adelaide's water storage. Schools closed and other precautions taken as a result of an epidemic of poliomyelitis.

1938—First South Australian Housing Trust dwelling completed.

1939—State's worst heat wave and disastrous bush fires experienced during the first two months of the year. Record high temperature of 47.6°C recorded in Adelaide. New Parliament House opened by His Excellency the Governor-General, Lord Gowrie.

1940—Goolwa Barrage completed at a cost of \$1 400 000. Birkenhead Bridge opened. A rapid development of secondary industry took place as munition annexes were added to existing factories and new factories were opened.

1941—Scriptural instruction in State schools commenced. First naval vessel built in South Australia launched. First blast furnace to be built at Whyalla went into operation. Child endowment payments inaugurated. Payroll tax commenced.

1942—Daylight saving of one hour introduced for almost three months. Wages and prices pegged and profits and interest rates restricted. Racing and bookmaking prohibited. Rationing of tea and clothing commenced. Widows pension instituted. The uniform Income Tax Act came into force. First coal obtained from Leigh Creek.

1943—Price Stabilisation legislation came into force. Butter rationing commenced. Wage and price subsidies were introduced and the prices of tea, potatoes and other commodities were reduced in order to bring price indexes and wages to a lower level. Racing resumed but betting shops remained closed.

1944—Rationing of meat began. Morgan-Whyalla pipeline officially opened. The first State election with compulsory voting took place. Severe water restrictions imposed. First output of Leigh Creek coal for electricity generation.

1945—Unemployment and sickness benefits came into operation. Restrictions imposed on the use of gas and electricity for domestic and industrial purposes.

1946—Commonwealth Government munition factories leased to various private firms. Payment of government subsidies to hospitals commenced. Restrictions on the use of gas and electricity again imposed. The Electricity Trust of South Australia took over the property and functions of the Adelaide Electric Supply Co.

1947—Fruit fly detected in metropolitan orchards and efforts made to eliminate it by stripping gardens and orchards. Sugar rationing abolished. Conciliation commissioners appointed following an amendment to the Federal Conciliation and Arbitration Act. Severe restrictions imposed on imports from North America.

1948—Restrictions on the use of gas and electricity imposed on a number of occasions during the year because of the shortage of coal. Preparation of the Woomera rocket range commenced. Forty-hour working week introduced by Arbitration Court award. Serious bush fires occurred in January. Severe storms during April resulted in widespread damage including the destruction of the Glenelg jetty. The free medicine scheme came into operation. Clothing and meat rationing abolished. Full scale production of the 'Holden' car commenced.

1949—Petrol rationing by the Commonwealth Government declared illegal but resumed later in the year under a State Act. An extended national coal strike occurred. Water pipeline to the Woomera rocket range completed. The Commonwealth and South Australian Governments ratified an agreement for the standardisation of railway gauges.

1950—Petrol, butter and tea rationing discontinued. Federal free drugs scheme came into operation. Water restrictions imposed in December and remained in force until June 1951.

1951—Serious bush fires occurred in January. Wool prices reached a record high level. Distribution of free milk to school children introduced.

1952—The hospital benefits scheme came into operation. Price control on clothing removed in South Australia. Severe import restrictions gazetted. Installations for the bulk handling of grain opened at Ardrossan. Compulsory chest X-rays introduced.

1953—Remaining controls on building removed. Port Pirie became the first country town to be proclaimed a city. The medical benefits scheme came into operation. Automatic quarterly cost-of-living adjustments to the basic wage discontinued. Size of the State Cabinet increased from six to eight Ministers.

1954—A severe earthquake occurred in Adelaide on 1 March. Her Majesty Queen Elizabeth II visited South Australia. First unit of Port Augusta power station opened. Construction of dwellings in Elizabeth commenced. Water from the River Murray pumped into metropolitan reservoirs through the Mannum pipeline.

1955—Adelaide Airport at West Beach opened. The new satellite town at Elizabeth officially opened.

1956—River Murray flooded for several months and caused considerable damage in irrigation and reclaimed areas. Town Planning Committee established. Atomic device exploded at Maralinga. Salk Poliomyelitis vaccination program commenced.

1957—Centenary of responsible government in South Australia celebrated. Long service leave legislation passed by the South Australian Parliament.

1958—Visit of Queen Elizabeth, the Queen Mother, to South Australia. Introduction of parking meters to Adelaide. South Para Reservoir opened and connected to Adelaide water supply. Final run by a street tram in Adelaide, following conversion to diesel bus transport.

1959—South Australia ceased to be a claimant State for special grants from Grants Commission. Full-scale television transmission commenced. Sir Thomas Playford created record term as Premier in a British country (26 years 125 days). Aborigines became eligible for age, invalid and widows pensions.

1960—First Adelaide Festival of Arts held (March 12-26). Completion of second unit and formal opening of Thomas Playford power station at Port Augusta.

1961—First United Kingdom Trade Commissioner appointed to South Australia. Compulsory driving tests introduced. The trailer ship *Troubridge* made its first run from Port Adelaide to Kingscote and Port Lincoln. Sturt's Desert Pea declared State's official floral emblem.

1962—Myponga Reservoir completed and linked to Happy Valley Reservoir. Duplication of Morgan-Whyalla pipeline commenced.

1963—Population of the State passed 1 000 000 mark. Port Stanvac oil refinery 'on stream'. School leaving age increased to fifteen years. Three weeks annual leave for employees governed by State awards and determinations introduced. First direct dialling for an overseas telephone call from South Australia. Major gas flow from Gidgealpa No. 2 well. Royal visit by her Majesty, Queen Elizabeth II.

1964—Work commenced on conversion of Port Pirie-Broken Hill railway to standard gauge. First gas from Port Stanvac refinery piped for use in Adelaide's gas supply. Record wind gust (148 km/h) and all-time low barometric reading (985 mb) registered at Adelaide on 12 July. New world land speed record set by Donald Campbell on Lake Eyre.

1965—Election of first Labor State Government since 1933. First country television station opened at Port Pirie. Steel works including a basic oxygen steel making plant opened at Whyalla. First tenders let for Torrens Island power structure. First woman judge in Australia appointed to Supreme Court of South Australia. Size of the State Cabinet increased from eight to nine Ministers.

1966—Women sworn in for jury service for the first time. The Flinders University of South Australia at Bedford Park officially opened by Queen Elizabeth the Queen Mother. Second major natural gas strike in Gidgealpa area. New outlet tunnel 2 700 metres long from Happy Valley Reservoir completed. ELDO rocket Europa-1 launched at Woomera. Industrial Commission of SA replaced the SA Board of Industry.

1967—Totalizator Agency Board operated off-course in South Australia for the first time. First South Australian lottery drawn. Federal Basic Wage superseded by Total Wage concept. Liquor trading hours extended to 10 p.m. WRESAT-1, first Australian orbital satellite launched from Woomera. New record low annual rainfall for Adelaide (257 mm). Torrens Island power station commenced operations. First off-shore drilling rig—*Ocean Digger*—constructed and launched at Whyalla.

1968—State Elections held. Labor Government returned but subsequently defeated on the floor of the House at the first meeting of the new Parliament. New Liberal Premier, R. S. Hall sworn in. Four weeks leave for State Government employees introduced. Construction commenced on State's first satellite communications station at Ceduna. Legal drinking age lowered from twenty-one to twenty. Sealed highway from Broken Hill to Adelaide opened. Sir James Harrison first Australian-born Governor of South Australia sworn in.

1969—Work begun on second major pipeline to bring River Murray water to Adelaide. Forty-first Congress of the Australian and New Zealand Association for the Advancement of Science held in Adelaide. Electricity Trust signed \$120 million contract for supply of natural gas. Natural gas flowed through completed 832 kilometre pipeline from Moomba-Gidgealpa to Adelaide.

1970—Abortion law reformed in South Australia. Work on standard gauge line between Port Pirie and Broken Hill begun. First direct telecast from England to Australia via satellite. First contracts signed for construction of \$4.8 million Adelaide Festival Theatre. Hairy-nosed wombat adopted as State's faunal emblem. South Australian Government applied to Commonwealth Grants Commission for financial assistance and received an interim grant.

1971—Fluoridation of Adelaide water supply commenced. Agreement for supply of natural gas to Sydney from South Australian gas fields finalised. Points demerit scheme for drivers who commit road traffic offences introduced. Age of majority reduced from twenty-one to eighteen. Commonwealth Government transferred power to levy payroll tax to the States. Daylight saving introduced in South Australia for the first time since the 1939-45 War. Agreement to build Dartmouth Reservoir ratified by SA Parliament. Plans announced for development of Patchawarra oil field at estimated cost of \$200 million including pipelines to Adelaide and Sydney. Death of SA Governor Sir James Harrison in office and Sir Mark Oliphant, the first SA born Governor, sworn in. Wearing of seat belts in motor vehicles made compulsory. Plans

announced by the South Australian National Football League for new headquarters at West Lakes.

**1972**—Plans announced for creation of new city of more than 100 000 people near Murray Bridge. New Stirling to Verdun freeway opened. Plans announced for the sealing of the Eyre Highway from Penong to the WA border. New laws regulating door-to-door selling and used car dealing introduced. Plans to filter Adelaide's water supply at a cost of \$35 million announced. University of Adelaide's educational radio station VL5UV commenced broadcasting. Work begun on \$40 million Flinders Medical Centre. Weather temperature reports changed to degrees Celsius. North Haven residential project to house 4 000 people at the northern end of Le Fevre Peninsula announced. Daylight saving re-introduced for 1972-73 and subsequent summers. South Australian Film Corporation commenced operation. South Australia's first Ombudsman appointed.

**1973**—New long service leave provision for three months leave after ten years service came into force. Plans announced for the building of a new \$40 million lubrication oil refinery at Port Stanvac. Work begun on \$62 million Dartmouth dam project. New \$11 million hospital opened at Modbury. Dunstan ALP Government returned at State election to become the first ALP Government to retain office after a general election in South Australia since 1910. Cross Lotto game introduced by State Lotteries Commission. Lake Eyre filled with water for the first time since 1950. \$6.6 million Adelaide Festival Theatre opened by the Prime Minister. Legislation enacted for adult franchise and proportional representation for the Legislative Council. Compulsory blood tests for road accident victims introduced. \$50 note issued for the first time. Bill passed in State Parliament for extensive improvement in workers' compensation benefits. Commonwealth Government took over responsibility for Aboriginal Affairs from South Australian Government.

**1974**—World Gliding Championships held at Waikerie. Prince Philip, the Duke of Edinburgh, visited South Australia. University of Adelaide celebrated its centenary. Prime Minister opened \$4.8 million Australian Broadcasting Commission complex at Collinswood. Police dog patrols commenced. Plans announced for building of \$2.8 million boat harbour at Taperoo. First match held at the new South Australian National Football League headquarters at West Lakes. Commonwealth Government agreed to provide \$22 million for the sealing of a new two-lane highway between Port Augusta and Alice Springs. Conversion of road signs to metric measurements undertaken. New development plan for Adelaide released. Judgment handed down making four weeks annual leave standard for workers under State awards. State primary schools began a new program of continuous admission of children on their fifth birthday. New State taxes on petrol and tobacco announced. Playhouse, Space and Amphitheatre at the Adelaide Festival Centre opened. Legislation allowing hotel trading to 12 midnight on Fridays and Saturdays came into force.

**1975**—Phase I of \$54 million Flinders Medical Centre opened. Transmission of television in colour commenced. Work began on \$140 million Tarcoola-Alice Springs rail link. International Equestrian Exposition 1975 held in Adelaide and attended by Her Royal Highness, Princess Anne. Plans announced for the building of a new meteorological centre at Kent Town. State Election held on 12 July, after

the Legislative Council failed to pass the Railways (Transfer Agreement) Bill; the Dunstan ALP Government was returned with a reduced majority and the Bill was subsequently passed. Medibank commenced operations in South Australia. Legislation for the redistribution of House of Assembly electoral boundaries passed by the Legislative Council. Bankcard began operations in South Australia. The South Australian Industrial Commission adopted the National Wage indexation guidelines for State awards.

**1976**—FM radio broadcasting began in South Australia. Rail track to Christie Downs opened. \$6.25 million Regency Park centre for treatment and care of physically handicapped children opened. A new commercial radio station (SAA) went to air, Adelaide's first for forty-six years. A new political party, the New Liberal Movement formed. The State Government announced plans to establish a Youth Work Unit to help school leavers and other unemployed young people to find jobs. Sir Douglas Nicholls appointed as Governor of South Australia from 1 December 1976. Sections on the new coastal route of the Eyre Highway opened. Smoking banned on buses operated by the Bus and Tram Division of the State Transport Authority. The Australia Post began a full courier service in Adelaide. Plans announced for on-the-spot fines of \$20 for littering. Price control on petrol removed for a six-month trial period. Plans announced for abolition of South Australian succession duties on estates passing to husbands and wives. Thirty-three metropolitan and fourteen country seats formed in the redistribution of House of Assembly electorates by the Electoral Boundaries Commission. Date stamping regulations for all short-life perishable foods approved by Executive Council. Rundle Mall commissioned by the Premier on 1 September. A total eclipse of the Sun occurred in parts of South Australia on 23 October. Large deposits of copper ore discovered at Roxby Downs near Andamooka. Legislation passed making rape within marriage a criminal offence. Capital punishment abolished in South Australia.

**1977**—The State Government announced a \$40 million oil and gas search program in the north of the State. Her Majesty Queen Elizabeth II and the Duke of Edinburgh visited South Australia. \$5.8 million Southern Plaza at the Adelaide Festival Centre officially opened by Her Majesty Queen Elizabeth II. The German vessel *Visurgis* became the first container ship to use the new container terminal at Outer Harbor. South Australia's first million dollar lottery, the Celebration Lottery, drawn by the Lotteries Commission. Plans announced for a \$11 million gas turbine generating plant to be built at Snuggery in the South East. The State Government Insurance Commission entered the field of life insurance. A Royal Commission established to enquire into shopping hours. A major deposit of sub-bituminous coal discovered near Lock. The State's new beverage container deposit legislation came into operation. The State Government announced plans for a new hospital to be built at Christies Beach. The South Australian Health Commission came into operation. Keith Seaman sworn in as the new Governor of South Australia. Adelaide's first water filtration plant at Hope Valley commenced operations. Legislation passed for the control of domestic and industrial noise. Late night shopping in city and suburbs commenced.

**1978**—State Government ordered a new \$17 million fleet of trains for the Adelaide commuter rail network. RAAF to spend \$300 million on new aircraft and facilities at Edinburgh. A Royal Commission held into the dismissal of Police

Commissioner Salisbury. The last ship to be built at Whyalla shipyards, the *Denis O'Malley*, was launched. State Government announced details of a new \$53 million high speed tramway to link north-eastern suburbs with Adelaide. Adelaide tramways held centenary celebrations. Lotteries Commission introduced Instant Money Game with prizes of up to \$10 000. The State Government released plans for the development of the Onkaparinga estuary. Semaphore-Glanville train line closed. South Australian Heritage Committee was formed. The second section of the Heysen trail, between Mount Lofty and Mount Magnificent was opened. State Government announced plans to establish a State trading corporation.

**1979**—Uranium deposit at Roxby Downs estimated at 100 000 tonnes. A new public transport zone-fare system introduced. D. A. Dunstan, the State's second longest serving Premier resigned for health reasons. Adelaide's unemployment levels highest in Australia in March—8·9 per cent of the workforce. Santos legislation passed, limiting maximum permissible single shareholdings to 15 per cent. Mitsubishi group of Japan obtained approximately one third interest in Chrysler Australia Ltd. A further section of the South East freeway, including Swanport Bridge, was opened for traffic. Approval has been given for one FM commercial station in Adelaide. The State Government announced the establishment of a Motor Vehicle Industry Assistance Committee. The first State Government Cabinet meeting outside Adelaide was held in Mount Gambier. The third section of the Heysen trail from Mount Lofty to Mount Crawford was opened. State elections held; D. O. Tonkin, new Liberal Premier, sworn in. Adelaide television station NWS9 sold to New South Wales interests. Merger of Bank of Adelaide with ANZ Banking Group approved. Charles Moore retail group ceased operating in South Australia.

**1980**—Norwood by-election, ordered by Court of Disputed Returns, won by ALP candidate G. Crafter. Bushfire destroyed 35 houses in Adelaide Hills, causing \$6 million damage. First of State Transport Authority's new series 2000 railcars began service. Mitsubishi Motor Corp. purchased control of Chrysler Australia Ltd. New slogan 'The Festival State' for South Australian motor vehicle number-plates. Constitutional Museum opened.

## **APPENDIX C**

# **RECENT INFORMATION**

In this section details are given of some important developments which have occurred recently. More up-to-date statistics than those shown in this volume are regularly incorporated in various statistical publications as they become available. A list is included on pages 665-6.

## **PART 6—SOCIAL ENVIRONMENT**

### *Courts*

The following statistical tables show figures relating to the outcome of higher criminal court proceedings in South Australia.

The higher criminal courts include the Supreme Court in Adelaide and its circuit sittings at Port Augusta and Mount Gambier, and the District Criminal Courts sitting in the Central, Northern and South Eastern districts. The figures have been compiled from statistical reports recording the outcome of the following higher criminal court proceedings:

- (i) committals for trial or sentence;
- (ii) applications by the Crown for estreatment of bonds in all South Australian higher criminal courts; and
- (iii) appeals to the Supreme Court against a conviction and/or sentence of a higher criminal court.

Generally, the higher courts are concerned with the more serious criminal cases in South Australia.

The classification of offences used is a statistical classification and is therefore confined to a limited number of categories of offences and matters dealt with by the courts.

The classification has of necessity been abbreviated in the tables that follow. It does not attempt to arrange the various offence categories in order of seriousness of offence although in some instances certain offence categories may seem to be ordered in this manner within a major group or subgroup (e.g. major/minor assault). The seriousness of an offence is indicated by relating it to other items of data such as penalty imposed.

However, the details by type of offence are not comparable with those already published in the South Australian Year Book because the offence classification has been revised.

Further detailed information and the definitions used are available in the bulletin *Higher Criminal Courts, South Australia 1977 and 1978* (Catalogue No. 4501.4).

### Persons Appearing Before Higher Criminal Courts: Principal Outcome South Australia, 1977 and 1978

Principal Outcome	1977			1978		
	Males	Females	Persons	Males	Females	Persons
Conviction:						
Guilty—no reparation .....	978	68	1 046	1 129	95	1 224
Guilty—reparation ordered (a) .....	25	4	29	32	2	34
Total convictions .....	1 003	72	1 075	1 161	97	1 258
Acquittal .....	59	6	65	95	6	101
Other outcome:						
Hung jury (b) .....	2	1	3	4	—	4
Accused died .....	3	—	3	3	—	3
Unfit to plead .....	—	—	—	—	—	—
Other not proceeded with .....	38	3	41	33	9	42
Total other outcomes .....	43	4	47	40	9	49
Total .....	1 105	82	1 187	1 296	112	1 408

(a) An offender is directed by a judge to make some form of reparation or compensation for personal injury or property damage, in addition to the penalty.

(b) A jury is unable to agree on the outcome of the hearing. It is then dismissed and a new jury empanelled at a future court sitting to resolve the hearing. This is the only recorded outcome which is not 'final' in nature.

### Persons Appearing Before Higher Criminal Courts Major Offence by Outcome, South Australia, 1977 and 1978

Major Offence	1977		1978	
	Tried	Convicted	Tried	Convicted
Homicide .....	44	30	43	29
Assault .....	261	214	301	229
Robbery and extortion .....	47	43	56	53
Fraud, forgery and misappropriation .....	98	91	108	97
Theft, breaking and entering .....	539	514	644	612
Property damage .....	20	18	24	22
Driving and related offences .....	3	3	12	12
Other offences .....	175	162	220	204
Total .....	1 187	1 075	1 408	1 258

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1301.4	South Australian Year Book (\$8.50 plus postage) a .....	1979	Dec. 1979
1302.4	Pocket Year Book of South Australia (\$1.20 plus postage) a .....	1980	Apr. 1980
1303.4	Monthly Summary of Statistics m .....	Aug. 1980	Aug. 1980
1304.4	Divisional Statistics irr .....	1979	Aug. 1979
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3201.4	Population and Dwellings in Local Government Areas hy .....	June 1979	July 1980
3202.4	Population Estimates, Local Government Areas irr .....	June 1976	May 1978
3203.4	Projections of the Population of South Australia irr .....	1978-2011	July 1979
3301.4	Births a .....	1979	May 1980
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8204.4	Manufacturing Establishments: Selected Items of Data Classified by Industry and Employment Size irr .....	1977-78	Mar. 1980
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8207.4	Domestic Appliance and Energy Usage irr .....	Apr. 1979	Sept. 1979
8301.4	Manufacturing Establishments: Manufacturing Commodities, Principal Articles Produced a .....	1974-75	Aug. 1977
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